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As of June 3, 2022

| Page | Kinase Name                | Assay Platform |
|------|----------------------------|----------------|
| 4    | ABL(ABL1)                  | MSA            |
| 4    | ABL(ABL1)[E255K]           | MSA            |
| 4    | ABL(ABL1)[T315I]           | MSA            |
| 4    | ACK(TNK2)                  | MSA            |
| 4    | AKT1                       | MSA            |
| 5    | AKT2                       | MSA            |
| 5    | AKT3                       | MSA            |
| 5    | ALK                        | MSA            |
| 5    | ALK[C1156Y]                | MSA            |
| 5    | ALK[F1174L]                | MSA            |
| 6    | ALK[G1202R]                | MSA            |
| 6    | ALK[G1269A]                | MSA            |
| 6    | ALK[L1196M]                | MSA            |
| 6    | ALK[R1275Q]                | MSA            |
| 6    | ALK[T1151_L1152insT]       | MSA            |
| 7    | EML4-ALK                   | MSA            |
| 7    | NPM1-ALK                   | MSA            |
| 7    | AMPKα1/β1/γ1(PRKAA1/B1/G1) | MSA            |
| 7    | AMPKα2/β1/γ1(PRKAA2/B1/G1) | MSA            |
| 7    | ARG(ABL2)                  | MSA            |
| 8    | AurA(AURKA)                | MSA            |
| 8    | AurA(AURKA)/TPX2           | MSA            |
| 8    | AurB(AURKB)/INCENP         | MSA            |
| 8    | AurC(AURKC)                | MSA            |
| 8    | AXL                        | MSA            |
| 9    | BLK                        | MSA            |
| 9    | BMX                        | MSA            |
| 9    | BRK(PTK6)                  | MSA            |
| 9    | BRSK1                      | MSA            |
| 9    | BRSK2                      | MSA            |
| 10   | BTK                        | MSA            |
| 10   | BTK[C481S]                 | MSA            |
| 10   | BUB1/BUB3                  | MSA            |
| 10   | CaMK1α(CAMK1)              | MSA            |
| 10   | CaMK1δ(CAMK1D)             | MSA            |
| 11   | CaMK2α(CAMK2A)             | MSA            |
| 11   | CaMK2β(CAMK2B)             | MSA            |
| 11   | CaMK2γ(CAMK2G)             | MSA            |
| 11   | CaMK2δ(CAMK2D)             | MSA            |
| 11   | CaMK4                      | MSA            |
| 12   | CDC2/CycB1                 | MSA            |
| 12   | CDC7/ASK                   | MSA            |
| 12   | CDK2/CycA2                 | MSA            |
| 12   | CDK2/CycE1                 | MSA            |
| 12   | CDK3/CycE1                 | MSA            |
| 13   | CDK4/CycD3                 | MSA            |
| 13   | CDK5/p25                   | MSA            |
| 13   | CDK6/CycD3                 | MSA            |
| 13   | CDK7/CycH/MAT1             | MSA            |
| 13   | CDK9/CycT1                 | MSA            |
| 14   | CGK2(PRKG2)                | MSA            |
| 14   | CHK1(CHEK1)                | MSA            |
| 14   | CHK2(CHEK2)                | MSA            |
| 14   | CK1α(CSNK1A1)              | MSA            |
| 14   | CK1γ1(CSNK1G1)             | MSA            |
| 15   | CK1γ2(CSNK1G2)             | MSA            |
| 15   | CK1γ3(CSNK1G3)             | MSA            |
| 15   | CK1δ(CSNK1D)               | MSA            |
| 15   | CK1ε(CSNK1E)               | MSA            |
| 15   | CK2α1/β(CSNK2A1/B)         | MSA            |
| 16   | CK2α2/β(CSNK2A2/B)         | MSA            |
| 16   | CLK1                       | MSA            |
| 16   | CLK2                       | MSA            |
| 16   | CLK3                       | MSA            |
| 16   | CRIK(CIT)                  | MSA            |
| 17   | CSK                        | MSA            |
| 17   | DAPK1                      | MSA            |
| 17   | DCAMKL2                    | MSA            |
| 17   | DDR1                       | MSA            |
| 17   | DDR2                       | MSA            |
| 18   | DYRK1A                     | MSA            |
| 18   | DYRK1B                     | MSA            |
| 18   | DYRK2                      | MSA            |
| 18   | DYRK3                      | MSA            |
| 18   | EEF2K                      | MSA            |
| 19   | EGFR                       | MSA            |
| 19   | EGFR[C797S/L858R]          | MSA            |
| 19   | EGFR[d746-750]             | MSA            |
| 19   | EGFR[d746-750/C797S]       | MSA            |
| 19   | EGFR[d746-750/T790M]       | MSA            |
| 20   | EGFR[d746-750/T790M/C797S] | MSA            |
| 20   | EGFR[D770_N771insNPG]      | MSA            |
| 20   | EGFR[L858R]                | MSA            |
| 20   | EGFR[L861Q]                | MSA            |
| 20   | EGFR[T790M]                | MSA            |

| Page | Kinase Name             | Assay Platform |
|------|-------------------------|----------------|
| 21   | EGFR[T790M/C797S/L858R] | MSA            |
| 21   | EGFR[T790M/L858R]       | MSA            |
| 21   | EPHA1                   | MSA            |
| 21   | EPHA2                   | MSA            |
| 21   | EPHA3                   | MSA            |
| 22   | EPHA4                   | MSA            |
| 22   | EPHA5                   | MSA            |
| 22   | EPHA6                   | MSA            |
| 22   | EPHA7                   | MSA            |
| 22   | EPHA8                   | MSA            |
| 23   | EPHB1                   | MSA            |
| 23   | EPHB2                   | MSA            |
| 23   | EPHB3                   | MSA            |
| 23   | EPHB4                   | MSA            |
| 23   | Erk1(MAPK3)             | MSA            |
| 24   | Erk2(MAPK1)             | MSA            |
| 24   | Erk5(MAPK7)             | MSA            |
| 24   | FAK(PTK2)               | MSA            |
| 24   | FER                     | MSA            |
| 24   | FES                     | MSA            |
| 25   | FGFR1                   | MSA            |
| 25   | FGFR1[V561M]            | MSA            |
| 25   | FGFR2                   | MSA            |
| 25   | FGFR2[V564I]            | MSA            |
| 25   | FGFR3                   | MSA            |
| 26   | FGFR3[K650E]            | MSA            |
| 26   | FGFR3[K650M]            | MSA            |
| 26   | FGFR3[V555L]            | MSA            |
| 26   | FGFR3[V555M]            | MSA            |
| 26   | FGFR4                   | MSA            |
| 27   | FGFR4[N535K]            | MSA            |
| 27   | FGFR4[V550E]            | MSA            |
| 27   | FGFR4[V550L]            | MSA            |
| 27   | FGR                     | MSA            |
| 27   | FLT1                    | MSA            |
| 28   | FLT3                    | MSA            |
| 28   | FLT4                    | MSA            |
| 28   | FMS(CSF1R)              | MSA            |
| 28   | FRK                     | MSA            |
| 28   | FYN[isoform a]          | MSA            |
| 29   | FYN[isoform b]          | MSA            |
| 29   | GSK3α(GSK3A)            | MSA            |
| 29   | GSK3β(GSK3B)            | MSA            |
| 29   | Haspin(GSG2)            | MSA            |
| 29   | HCK                     | MSA            |
| 30   | HER2(ERBB2)             | MSA            |
| 30   | HER4(ERBB4)             | MSA            |
| 30   | HGK(MAP4K4)             | MSA            |
| 30   | HIPK1                   | MSA            |
| 30   | HIPK2                   | MSA            |
| 31   | HIPK3                   | MSA            |
| 31   | HIPK4                   | MSA            |
| 31   | HPK1(MAP4K1)            | MSA            |
| 31   | IGF1R                   | MSA            |
| 31   | IKKα(CHUK)              | IMAP           |
| 32   | IKKβ(IKBKB)             | MSA            |
| 32   | IKKε(IKBKE)             | MSA            |
| 32   | INSR                    | MSA            |
| 32   | IRAK1                   | IMAP           |
| 32   | IRAK4                   | MSA            |
| 33   | IRR(INSRR)              | MSA            |
| 33   | ITK                     | MSA            |
| 33   | JAK1                    | MSA            |
| 33   | JAK2                    | MSA            |
| 33   | JAK3                    | MSA            |
| 34   | JNK1(MAPK8)             | MSA            |
| 34   | JNK2(MAPK9)             | MSA            |
| 34   | JNK3(MAPK10)            | MSA            |
| 34   | KDR                     | MSA            |
| 34   | KIT                     | MSA            |
| 35   | KIT[D816E]              | MSA            |
| 35   | KIT[D816V]              | MSA            |
| 35   | KIT[D816Y]              | MSA            |
| 35   | KIT[T670I]              | MSA            |
| 35   | KIT[V560G]              | MSA            |
| 36   | KIT[V654A]              | MSA            |
| 36   | LATS2                   | MSA            |
| 36   | LCK                     | MSA            |
| 36   | LOK(STK10)              | MSA            |
| 37   | LTK                     | MSA            |
| 37   | LYNa                    | MSA            |
| 37   | LYNb                    | MSA            |
| 37   | MAP4K2                  | MSA            |
| 37   | MAPKAPK2                | MSA            |
| 37   | MAPKAPK3                | MSA            |

| Page | Kinase Name          | Assay Platform |
|------|----------------------|----------------|
| 38   | MAPKAPK5             | MSA            |
| 38   | MARK1                | MSA            |
| 38   | MARK2                | MSA            |
| 38   | MARK3                | MSA            |
| 38   | MARK4                | MSA            |
| 39   | MELK                 | MSA            |
| 39   | MER(MERTK)           | MSA            |
| 39   | MET                  | MSA            |
| 39   | MET[D1228H]          | MSA            |
| 39   | MET[M1250T]          | MSA            |
| 40   | MET[Y1235D]          | MSA            |
| 40   | MINK(MINK1)          | MSA            |
| 40   | MNK1(MKNK1)          | MSA            |
| 40   | MNK2(MKNK2)          | MSA            |
| 40   | MRCKα(CDC42BPA)      | MSA            |
| 41   | MRCKβ(CDC42BPP)      | MSA            |
| 41   | MSK1(RPS6KA5)        | MSA            |
| 41   | MSK2(RPS6KA4)        | MSA            |
| 41   | MSSK1(STK23)         | MSA            |
| 41   | MST1(STK4)           | MSA            |
| 42   | MST2(STK3)           | MSA            |
| 42   | MST3(STK24)          | MSA            |
| 42   | MST4                 | MSA            |
| 42   | MUSK                 | MSA            |
| 42   | NDR1(STK38)          | MSA            |
| 43   | NDR2(STK38L)         | MSA            |
| 43   | NEK1                 | MSA            |
| 43   | NEK2                 | MSA            |
| 43   | NEK4                 | MSA            |
| 43   | NEK6                 | MSA            |
| 44   | NEK7                 | MSA            |
| 44   | NEK9                 | MSA            |
| 44   | NIM1K(MGC42105)      | MSA            |
| 44   | NuaK1                | MSA            |
| 44   | NuaK2                | MSA            |
| 45   | p38α(MAPK14)         | MSA            |
| 45   | p38β(MAPK11)         | MSA            |
| 45   | p38γ(MAPK12)         | MSA            |
| 45   | p38δ(MAPK13)         | MSA            |
| 45   | p70S6K(RPS6KB1)      | MSA            |
| 46   | p70S6Kβ(RPS6KB2)     | MSA            |
| 46   | PAK1                 | MSA            |
| 46   | PAK2                 | MSA            |
| 46   | PAK4                 | MSA            |
| 46   | PAK5(PAK7)           | MSA            |
| 47   | PAK6                 | MSA            |
| 47   | PASK                 | MSA            |
| 47   | PBK                  | MSA            |
| 47   | PDGFRα(PDGFR)        | MSA            |
| 47   | PDGFRα(PDGFR)[D842V] | MSA            |
| 48   | PDGFRα(PDGFR)[T674I] | MSA            |
| 48   | PDGFRα(PDGFR)[V561D] | MSA            |
| 48   | PDGFRβ(PDGFRB)       | MSA            |
| 48   | PDHK2(PDK2)          | MSA            |
| 48   | PDHK4(PDK4)          | MSA            |
| 49   | PDK1(PDPK1)          | MSA            |
| 49   | PEK(EIF2AK3)         | IMAP           |
| 49   | PGK(PRKG1)           | MSA            |
| 49   | PHKG1                | MSA            |
| 49   | PHKG2                | MSA            |
| 50   | PIK3CA/PIK3R1        | ADP-Glo        |
| 50   | PIK3CB/PIK3R1        | ADP-Glo        |
| 50   | PIK3CD/PIK3R1        | ADP-Glo        |
| 50   | PIKFYVE(PIP5K3)      | ADP-Glo        |
| 50   | PIM1                 | MSA            |
| 51   | PIM2                 | MSA            |
| 51   | PIM3                 | MSA            |
| 51   | PIP4K2A              | ADP-Glo        |
| 51   | PIP4K2B              | ADP-Glo        |
| 51   | PIP5K1A              | ADP-Glo        |
| 52   | PIP5K1B              | ADP-Glo        |
| 52   | PIP5K1C              | ADP-Glo        |
| 52   | PIP5K1L              | ADP-Glo        |
| 52   | PKAα(PRKACA)         | MSA            |
| 52   | PKAβ(PRKACB)         | MSA            |
| 53   | PKAγ(PRKACG)         | MSA            |
| 53   | PKCa(PRKCA)          | MSA            |
| 53   | PKCβ1(PRKCB1)        | MSA            |
| 53   | PKCβ2(PRKCB2)        | MSA            |
| 53   | PKCγ(PRKCG)          | MSA            |
| 54   | PKCδ(PRKCD)          | MSA            |
| 54   | PKCε(PRKCE)          | MSA            |
| 54   | PKCζ(PRKCZ)          | MSA            |
| 54   | PKCη(PRKCH)          | MSA            |
| 54   | PKCθ(PRKCQ)          | MSA            |
| 55   | PKCi(PRKCI)          | MSA            |
| 55   | PKD1(PRKD1)          | MSA            |
| 55   | PKD2(PRKD2)          | MSA            |
| 55   | PKD3(PRKD3)          | MSA            |
| 55   | PKN1                 | IMAP           |

| Page | Kinase Name       | Assay Platform |
|------|-------------------|----------------|
| 56   | PKR(EIF2AK2)      | IMAP           |
| 56   | PLK1              | MSA            |
| 56   | PLK2              | IMAP           |
| 56   | PLK3              | MSA            |
| 56   | PRKX              | MSA            |
| 57   | PYK2(PTK2B)       | MSA            |
| 57   | QIK(SNF1LK2)      | MSA            |
| 57   | RET               | MSA            |
| 57   | RET[G691S]        | MSA            |
| 57   | RET[M918T]        | MSA            |
| 58   | RET[S891A]        | MSA            |
| 58   | RET[Y791F]        | MSA            |
| 58   | ROCK1             | MSA            |
| 58   | ROCK2             | MSA            |
| 58   | RON(MST1R)        | MSA            |
| 59   | ROS(ROS1)         | MSA            |
| 59   | RSK1(RPS6KA1)     | MSA            |
| 59   | RSK2(RPS6KA3)     | MSA            |
| 59   | RSK3(RPS6KA2)     | MSA            |
| 59   | RSK4(RPS6KA6)     | MSA            |
| 60   | SGK               | MSA            |
| 60   | SGK2              | MSA            |
| 60   | SGK3(SGKL)        | MSA            |
| 60   | SIK(SNF1LK)       | MSA            |
| 60   | skMLCK(MYLK2)     | MSA            |
| 61   | SLK               | MSA            |
| 61   | SPHK1             | MSA            |
| 61   | SPHK2             | MSA            |
| 61   | SRC               | MSA            |
| 61   | SRM(SRMS)         | MSA            |
| 62   | SRPK1             | IMAP           |
| 62   | SRPK2             | MSA            |
| 62   | SYK               | MSA            |
| 62   | TAK1-TAB1(MAP3K7) | MSA            |
| 62   | TAOK2             | MSA            |
| 63   | TBK1              | MSA            |
| 63   | TEC               | MSA            |
| 63   | TIE2(TEK)         | MSA            |
| 63   | TNIK              | MSA            |
| 63   | TNK1              | MSA            |
| 64   | TRKA(NTRK1)       | MSA            |
| 64   | TRKB(NTRK2)       | MSA            |
| 64   | TRKC(NTRK3)       | MSA            |
| 64   | TSSK1             | MSA            |
| 64   | TSSK2             | MSA            |
| 65   | TSSK3             | MSA            |
| 65   | TXK               | MSA            |
| 65   | TYK2              | MSA            |
| 65   | TYRO3             | MSA            |
| 65   | WNK1              | MSA            |
| 66   | WNK2              | MSA            |
| 66   | WNK3              | MSA            |
| 66   | YES(YES1)         | MSA            |
| 66   | YES(YES1)[T348I]  | MSA            |
| 66   | ZAP70             | MSA            |

<< Cascade Assay >>

| Page | Kinase Name   | Assay Platform |
|------|---------------|----------------|
| 67   | BRAF          | MSA            |
| 67   | BRAF[V600E]   | MSA            |
| 67   | COT(MAP3K8)   | MSA            |
| 67   | DLK(MAP3K12)  | MSA            |
| 67   | MAP2K1        | MSA            |
| 68   | MAP2K2        | MSA            |
| 68   | MAP2K3        | MSA            |
| 68   | MAP2K4        | MSA            |
| 68   | MAP2K5        | MSA            |
| 68   | MAP2K6        | MSA            |
| 69   | MAP2K7        | MSA            |
| 69   | MAP3K1        | MSA            |
| 69   | MAP3K2        | MSA            |
| 69   | MAP3K3        | MSA            |
| 69   | MAP3K4        | MSA            |
| 70   | MAP3K5        | MSA            |
| 70   | MLK1(MAP3K9)  | MSA            |
| 70   | MLK2(MAP3K10) | MSA            |
| 70   | MLK3(MAP3K11) | MSA            |
| 70   | MOS           | MSA            |
| 71   | RAF1          | MSA            |

- The Kinase Company -

**Carna Biosciences, Inc.**

TEL : +81-78-302-7091 / FAX: +81-78-302-7086

Email: info@carnabio.com

www.carnabio.com

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## ABL(ABL1)

Product code 08-001

Full-length human ABL [2-1130(end) amino acids of accession number NP\_005148.2] was expressed as N-terminal His-tagged protein (126 kDa) using baculovirus expression system. His-tagged ABL was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : ABLtide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 75  
 IC50 at 1 mM ATP (nM) : 1300

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## ABL(ABL1)[E255K]

Product code 08-094

Full-length human ABL [2-1130(end) amino acids and E255K of accession number NP\_005148.2] was expressed as N-terminal His-tagged protein (126 kDa) using baculovirus expression system. His-tagged ABL[E255K] was purified by using Ni-NTA affinity chromatography .

Assay platform : Mobility Shift Assay  
 Substrate : ABLtide  
 ATP ( $\mu$ M) Km app / Bin : 17 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 140  
 IC50 at 1 mM ATP (nM) : 4500

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## ABL(ABL1)[T315I]

Product code 08-093

Full-length human ABL [2-1130(end) amino acids and T315I of accession number NP\_005148.2] was expressed as N-terminal His-tagged protein (126 kDa) using baculovirus expression system. His-tagged ABL[T315I] was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : ABLtide  
 ATP ( $\mu$ M) Km app / Bin : 4 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 6.4  
 IC50 at 1 mM ATP (nM) : 890

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## ACK(TNK2)

Product code 08-196

Human ACK, catalytic domain [110-476 amino acids of accession number NP\_005772.3] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-ACK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : WASP peptide  
 ATP ( $\mu$ M) Km app / Bin : 97 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.2  
 IC50 at 1 mM ATP (nM) : 3.8

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## AKT1

Product code 01-101

Human AKT1, catalytic domain [104-480(end) amino acids of accession number NP\_005154.1] was co-expressed as N-terminal GST-fusion protein (70 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-AKT1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Crosstide  
 ATP ( $\mu$ M) Km app / Bin : 31 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.7  
 IC50 at 1 mM ATP (nM) : 22

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## AKT2

Product code 01-102

Human AKT2, catalytic domain [120-481(end) amino acids of accession number NP\_001617.1] was co-expressed as N-terminal GST-fusion protein (69 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-AKT2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Crosstide  
 ATP ( $\mu$ M) Km app / Bin : 110 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 5.2  
 IC50 at 1 mM ATP (nM) : n.a.

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## AKT3

Product code 01-103

Human AKT3, catalytic domain [108-479(end) amino acids of accession number NP\_005456.1] was co-expressed as N-terminal GST-fusion protein (70 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-AKT3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Crosstide  
 ATP ( $\mu$ M) Km app / Bin : 54 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.2  
 IC50 at 1 mM ATP (nM) : n.a.

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## ALK

Product code 08-518

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 57 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.5  
 IC50 at 1 mM ATP (nM) : 15

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## ALK[C1156Y]

Product code 08-530

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and C1156Y, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[C1156Y] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 64 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.9  
 IC50 at 1 mM ATP (nM) : 11

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## ALK[F1174L]

Product code 08-519

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and F1174L, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[F1174L] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 49 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.4  
 IC50 at 1 mM ATP (nM) : 21

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## ALK[G1202R]

Product code 08-544

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and G1202R, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[G1202R] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 31 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 7.3  
 IC50 at 1 mM ATP (nM) : 69

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## ALK[G1269A]

Product code 08-537

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and G1269A, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[G1269A] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.36  
 IC50 at 1 mM ATP (nM) : 1.6

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## ALK[L1196M]

Product code 08-529

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and L1196M, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[L1196M] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 57 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.66  
 IC50 at 1 mM ATP (nM) : 4.3

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## ALK[R1275Q]

Product code 08-520

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and R1275Q, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[R1275Q] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 84 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.3  
 IC50 at 1 mM ATP (nM) : 16

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## ALK[T1151\_L1152insT]

Product code 08-539

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and T1151\_L1152insT, I1461V, K1491R, D1529E of accession number NP\_004295.2] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-ALK[T1151\_L1152insT] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 110 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 6.5  
 IC50 at 1 mM ATP (nM) : 16

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## EML4-ALK

Product code 08-516

Fused gene of human fusion EML4-ALK [1-1059 amino acids of accession number BAF73611.1] was expressed as N-terminal GST-fusion protein (145 kDa) using baculovirus expression system. GST-EML4-ALK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 43 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.9  
 IC50 at 1 mM ATP (nM) : 16

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## NPM1-ALK

Product code 08-517

Fused gene of human fusion NPM1-ALK [1-680 amino acids of accession number BAA08343.1] was expressed as N-terminal GST-fusion protein (103kDa) using baculovirus expression system. GST-NPM1-ALK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 57 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.4  
 IC50 at 1 mM ATP (nM) : 14

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## AMPK $\alpha$ 1/ $\beta$ 1/ $\gamma$ 1(PRKAA1/B1/G1)

Product code 02-113

Full-length human AMPK $\alpha$ 1 [1-550(end) amino acids of accession number NP\_006242.4] was co-expressed as N-terminal GST-fusion protein (90 kDa) with GST-PRKAB1 [1-270(end) amino acids of accession number NP\_006244.2] and PRKAG1 [1-331(end) amino acids of accession number NP\_002724.1] using baculovirus expression system. GST-AMPK $\alpha$ 1/ $\beta$ 1/ $\gamma$ 1 was purified by using glutathione sepharose chromatography and activated with His-tagged CaMKK1. Activated GST-AMPK $\alpha$ 1/ $\beta$ 1/ $\gamma$ 1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SAMS peptide  
 ATP ( $\mu$ M) Km app / Bin : 130 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.41  
 IC50 at 1 mM ATP (nM) : 0.87

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## AMPK $\alpha$ 2/ $\beta$ 1/ $\gamma$ 1(PRKAA2/B1/G1)

Product code 02-114

Full-length human AMPK $\alpha$ 2 [1-552(end) amino acids of accession number NP\_006243.2] was co-expressed as N-terminal GST-fusion protein (89 kDa) with GST-PRKAB1 [1-270(end) amino acids of accession number NP\_006244.2] and PRKAG1 [1-331(end) amino acids of accession number NP\_002724.1] using baculovirus expression system. GST-AMPK $\alpha$ 2/ $\beta$ 1/ $\gamma$ 1 was purified by using glutathione sepharose chromatography and activated with His-tagged CaMKK1. Activated GST-AMPK $\alpha$ 2/ $\beta$ 1/ $\gamma$ 1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SAMS peptide  
 ATP ( $\mu$ M) Km app / Bin : 100 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.79  
 IC50 at 1 mM ATP (nM) : n.a.

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## ARG(ABL2)

Product code 08-102

Truncated human ARG [2-52, 74-1182(end) amino acids of accession number NP\_009298.1] was expressed as N-terminal GST-fusion protein (153 kDa) using baculovirus expression system. GST-ARG was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : ABLtide  
 ATP ( $\mu$ M) Km app / Bin : 24 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 27  
 IC50 at 1 mM ATP (nM) : 400

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## AurA(AURKA)

Product code 05-101

Full-length human AurA [1-403(end) amino acids of accession number NP\_940835.1] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-AurA was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.8  
 IC50 at 1 mM ATP (nM) : 17

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## AurA(AURKA)/TPX2

Product code 05-186

Full-length human AurA [1-403(end) amino acids of accession number NP\_940835.1] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-AurA was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 1.7 / 2  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 6.1  
 IC50 at 1 mM ATP (nM) : n.a.

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## AurB(AURKB)/INCENP

Product code 05-102

Full-length human AurB [1-344(end) amino acids of accession number NP\_004208.2] was co-expressed as N-terminal GST-fusion protein (66 kDa) with His-tagged INCENP(INBOX) [803-918(end) amino acids of accession number NP\_001035784.1] using baculovirus expression system. GST-AurB was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 7.1  
 IC50 at 1 mM ATP (nM) : 62

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## AurC(AURKC)

Product code 05-103

Full-length human AurC [1-275(end) amino acids of accession number NP\_003151.2] was expressed as N-terminal GST-fusion protein (59 kDa) using baculovirus expression system. GST-AurC was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 24 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.1  
 IC50 at 1 mM ATP (nM) : 18

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## AXL

Product code 08-107

Human AXL, cytoplasmic domain [464-885(end) amino acids of accession number NP\_001690.2] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-AXL was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 32 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : 7.9

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## BLK

Product code 08-164

Full-length human BLK [1-505(end) amino acids of accession number NP\_001706.2] was expressed as N-terminal GST-fusion protein (85 kDa) using baculovirus expression system. GST-BLK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 62 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.6  
 IC50 at 1 mM ATP (nM) : 17

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## BMX

Product code 08-179

Full-length human BMX [1-675(end) amino acids of accession number NP\_001712.1] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-BMX was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 75 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 10  
 IC50 at 1 mM ATP (nM) : 45

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## BRK(PTK6)

Product code 08-165

Full-length human BRK [2-451(end) amino acids of accession number NP\_005966.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-BRK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 250 / 250  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 260  
 IC50 at 1 mM ATP (nM) : 390

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## BRSK1

Product code 02-115

Full-length human BRSK1 [1-778(end) amino acids of accession number NP\_115806.1] was expressed as N-terminal GST-fusion protein (112 kDa) using baculovirus expression system. GST-BRSK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 30 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.27  
 IC50 at 1 mM ATP (nM) : 0.57

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## BRSK2

Product code 02-116

Full-length human BRSK2 [1-674(end) amino acids of accession number ABA17261.1] was expressed as N-terminal GST-fusion protein (102 kDa) using baculovirus expression system. GST-BRSK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 31 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.31  
 IC50 at 1 mM ATP (nM) : n.a.



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## BTK

Product code 08-180

Full-length human BTK [2-659(end) amino acids of accession number NP\_000052] was expressed as N-terminal GST-fusion protein (103 kDa) using baculovirus expression system. GST-BTK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 22 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 24  
 IC50 at 1 mM ATP (nM) : 93

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## BTK[C481S]

Product code 08-547

Full-length human BTK [2-659(end) amino acids and C481S of accession number NP\_000052] was expressed as N-terminal GST-fusion protein (103 kDa) using baculovirus expression system. GST-BTK[C481S] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 37  
 IC50 at 1 mM ATP (nM) : 170

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## BUB1/BUB3

Product code 05-187

Full-length human BUB1 [1-1085 (end) amino acids of accession number NP\_004327] was co-expressed as N-terminal GST-fusion protein (149 kDa) with DYKDDDDK tagged BUB3 [1-328 (end) amino acids of accession number NP\_004716] using baculovirus expression system. GST-BUB1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : H2A peptide  
 ATP ( $\mu$ M) Km app / Bin : 2.9 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 300  
 IC50 at 1 mM ATP (nM) : n.a.

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## CaMK1 $\alpha$ (CAMK1)

Product code 02-104

Full-length human CaMK1 $\alpha$  [1-370(end) amino acids of accession number NP\_003647.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-CaMK1 $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 750 / 1000  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 16  
 IC50 at 1 mM ATP (nM) : 16

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## CaMK1 $\delta$ (CAMK1D)

Product code 02-106

Full-length human CaMK1 $\delta$ [1-357(end) amino acid of accession number NP\_065130.1] was expressed as N-terminal GST-fusion protein (67 kDa) using baculovirus expression system. GST-CaMK1 $\delta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Synapsin peptide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.5  
 IC50 at 1 mM ATP (nM) : n.a.

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## CaMK2 $\alpha$ (CAMK2A)

Product code 02-109

Full-length human CaMK2 $\alpha$  [1-478(end) amino acids of accession number NP\_741960.1] was expressed as N-terminal GST-fusion protein (81 kDa) using baculovirus expression system. GST-CaMK2 $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 33 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.75  
 IC50 at 1 mM ATP (nM) : n.a.

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## CaMK2 $\beta$ (CAMK2B)

Product code 02-110

Full-length human CaMK2 $\beta$  [1-503 amino acids of accession number NP\_742078.1] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-CaMK2 $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 19 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.54  
 IC50 at 1 mM ATP (nM) : 5.8

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## CaMK2 $\gamma$ (CAMK2G)

Product code 02-112

Full-length human CaMK2 $\gamma$ [1-518(end) amino acids of accession number NP\_751910.1] was expressed as N-terminal GST-fusion protein (85 kDa) using baculovirus expression system. GST-CaMK2 $\gamma$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 23 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.39  
 IC50 at 1 mM ATP (nM) : n.a.

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## CaMK2 $\delta$ (CAMK2D)

Product code 02-111

Full-length human CaMK2 $\delta$  [1-478 amino acids of accession number NP\_742113.1] was expressed as N-terminal GST-fusion protein (81 kDa) using baculovirus expression system. GST-CaMK2 $\delta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 6.3 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.26  
 IC50 at 1 mM ATP (nM) : n.a.

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## CaMK4

Product code 02-108

Full-length human CaMK4 [1-473(end) amino acids of accession number NP\_001735.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-CaMK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 140  
 IC50 at 1 mM ATP (nM) : 1000

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## CDC2/CycB1

Product code [04-102](#)

Full-length human CDC2 [1-297(end) amino acids of accession number NP\_001777.1] was co-expressed as N-terminal GST-fusion protein (61 kDa) with CyclinB1 [1-433(end) amino acids of accession number NP\_114172.1] using baculovirus expression system. GST-CDC2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Histone H1  
 ATP ( $\mu$ M) Km app / Bin : 34 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.3  
 IC50 at 1 mM ATP (nM) : 32

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## CDC7/ASK

Product code [05-109](#)

Full-length human CDC7 [1-574(end) amino acids of accession number NP\_003494.1] was co-expressed as N-terminal GST-fusion protein (92 kDa) with Dbf4(ASK) [1-674(end) amino acids of accession number NP\_006707.1] using baculovirus expression system. GST-CDC7 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MCM2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 2.8 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 16  
 IC50 at 1 mM ATP (nM) : 1600

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## CDK2/CycA2

Product code [04-103](#)

Full-length human CDK2 [1-298(end) amino acids of accession number NP\_001789.2] was co-expressed as N-terminal GST-tagged protein (61 kDa) with GST-CyclinA2 [1-432(end) amino acids of accession number NP\_001228.1] using baculovirus expression system. GST-CDK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Histone H1  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 7.1

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## CDK2/CycE1

Product code [04-165](#)

Full-length human CDK2 [1-298(end) amino acids of accession number NP\_001789.2] was co-expressed as N-terminal GST-tagged protein (61 kDa) with CyclinE1 [1-410(end) amino acids of accession number NP\_001229.1] using baculovirus expression system. GST-CDK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Histone H1  
 ATP ( $\mu$ M) Km app / Bin : 130 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.8  
 IC50 at 1 mM ATP (nM) : 10

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## CDK3/CycE1

Product code [04-104](#)

Full-length human CDK3 [1-305(end) amino acids of accession number NP\_001249.1] was co-expressed as N-terminal GST-fusion protein (62kDa) with CyclinE1 [1-410(end) amino acids of accession number NP\_001229.1] using baculovirus expression system. GST-CDK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Histone H1  
 ATP ( $\mu$ M) Km app / Bin : 1000 / 1000  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.4  
 IC50 at 1 mM ATP (nM) : 3.4

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## CDK4/CycD3

Product code [04-105](#)

Full-length human CDK4 [1-303(end) amino acids of accession number NP\_000066.1] was co-expressed as N-terminal GST-fusion protein (61 kDa) with human GST-CyclinD3 [1-292(end) amino acids of accession number AAA51927.1] using baculovirus expression system. GST-CDK4/CycD3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 200 / 200  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 13  
 IC50 at 1 mM ATP (nM) : 52

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## CDK5/p25

Product code [04-106](#)

Full-length human CDK5 [1-292(end) amino acids of accession number NP\_004926.1] was co-expressed as N-terminal GST-fusion protein (60 kDa) with p25 [99-307(end) amino acids of accession number NP\_003876.1] using baculovirus expression system. GST-CDK5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Histone H1  
 ATP ( $\mu$ M) Km app / Bin : 10 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.5  
 IC50 at 1 mM ATP (nM) : 86

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## CDK6/CycD3

Product code [04-107](#)

Full-length human CDK6 [1-326(end) amino acids of accession number NP\_001250.1] was co-expressed as N-terminal GST-fusion protein (64 kDa) with human GST-CyclinD3 [1-292(end) amino acids of accession number AAA51927.1] using baculovirus expression system. GST-CDK6/CycD3 was purified by using glutathione sepharose chromatography and activated with His-tagged CDK7. Activated GST-CDK6/CycD3 was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 330 / 300  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 58  
 IC50 at 1 mM ATP (nM) : 110

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## CDK7/CycH/MAT1

Product code [04-108](#)

Full-length human CDK7 [1-346(end) amino acids of accession number NP\_001790.1] was co-expressed as N-terminal GST-fusion protein (66 kDa) with CyclinH [1-323(end) amino acids of accession number NP\_001230.1] and MAT1 [1-309(end) amino acids of accession number NP\_002422.1] using baculovirus expression system. GST-CDK7 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CTD3 peptide  
 ATP ( $\mu$ M) Km app / Bin : 32 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 17  
 IC50 at 1 mM ATP (nM) : 120

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## CDK9/CycT1

Product code [04-110](#)

Full-length human CDK9 [1-372(end) amino acids of accession number NP\_001252.1] was co-expressed as N-terminal GST-fusion protein (70 kDa) with His-CyclinT1 [1-726(end) amino acids of accession number NP\_001231.2] using baculovirus expression system. GST-CDK9 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK9 substrate  
 ATP ( $\mu$ M) Km app / Bin : 9.4 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 5.2  
 IC50 at 1 mM ATP (nM) : 130

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## CHK1(CHEK1)

Product code 02-117

Full-length human CHK1 [1-476(end) amino acids of accession number NP\_001265.1] was expressed as N-terminal GST-fusion protein (81 kDa) using baculovirus expression system. GST-CHK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 50 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.24  
 IC50 at 1 mM ATP (nM) : 1.1

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## CHK2(CHEK2)

Product code 02-162

Full-length human CHK2 [1-543(end) amino acids of accession number NP\_009125.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-CHK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 51 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 11  
 IC50 at 1 mM ATP (nM) : 25

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## CK1 $\alpha$ (CSNK1A1)

Product code 03-101

Full-length human CK1 $\alpha$  [1-337(end) amino acids of accession number NP\_001883.4] was expressed as N-terminal GST-fusion protein (66 kDa) using baculovirus expression system. GST-CK1 $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 4.1 / 5  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 150  
 IC50 at 1 mM ATP (nM) : >10000

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## CK1 $\gamma$ 1(CSNK1G1)

Product code 03-105

Full-length human CK1 $\gamma$ 1 [1-422(end) amino acids of accession number NP\_071331.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-CK1 $\gamma$ 1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 6.3 / 5  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 1300  
 IC50 at 1 mM ATP (nM) : n.a.

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## CK1 $\gamma$ 2(CSNK1G2)

Product code 03-106

Full-length human CK1 $\gamma$ 2 [1-415(end) amino acids of accession number NP\_001310.3] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-CK1 $\gamma$ 2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 10 / 10  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 510  
 IC50 at 1 mM ATP (nM) : n.a.

---

## CK1 $\gamma$ 3(CSNK1G3)

Product code 03-107

Full-length human CK1 $\gamma$ 3 [1-447(end) amino acids of accession number NP\_004375.2] was expressed as N-terminal GST-fusion protein (78 kDa) using baculovirus expression system. GST-CK1 $\gamma$ 3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 3.2 / 5  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 920  
 IC50 at 1 mM ATP (nM) : n.a.

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## CK1 $\delta$ (CSNK1D)

Product code 03-103

Human CK1 $\delta$ , catalytic domain [1-294 amino acids of accession number NP\_001884.2] was expressed as N-terminal GST-fusion protein (61 kDa) using E. coli expression system. GST-CK1 $\delta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 7.7 / 10  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 25  
 IC50 at 1 mM ATP (nM) : 570

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## CK1 $\epsilon$ (CSNK1E)

Product code 03-104

Human CK1 $\epsilon$ , catalytic domain [1-348 amino acids of accession number NP\_001885.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-CK1 $\epsilon$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : 5-Iodotubercidin  
 IC50 at ATP Bin (nM) : 300  
 IC50 at 1 mM ATP (nM) : 5800

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## CK2 $\alpha$ 2/ $\beta$ (CSNK2A2/B)

Product code 05-185

Full-length human CK2 $\alpha$ 2 [1-350(end) amino acids of accession number NP\_001887.1] was co-expressed as N-terminal GST-fusion protein (68 kDa) with human His-tagged CK2 $\beta$  [1-215 amino acids of accession number NP\_001311.3] using baculovirus expression system. GST-CK2 $\alpha$ 2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CK2tide  
 ATP ( $\mu$ M) Km app / Bin : 2.1 / 5  
 Metal : Mg  
 Reference compound : TBB  
 IC50 at ATP Bin (nM) : 50  
 IC50 at 1 mM ATP (nM) : n.a.

---

## CLK1

Product code 04-126

Human CLK1, catalytic domain [129-484(end) amino acids of accession number NP\_004062.2] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-CLK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 9.6  
 IC50 at 1 mM ATP (nM) : 60

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## CLK2

Product code 04-127

Full-length human CLK2 [1-499(end) amino acids of accession number AAH53603.1] was expressed as N-terminal GST-fusion protein (87 kDa) using baculovirus expression system. GST-CLK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 140 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.6  
 IC50 at 1 mM ATP (nM) : 28

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## CLK3

Product code 04-128

Full-length human CLK3 [1-490(end) amino acids of accession number AAH02555.1] was expressed as N-terminal GST-fusion protein (86 kDa) using baculovirus expression system. GST-CLK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 75 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 820  
 IC50 at 1 mM ATP (nM) : n.a.

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## CRK(CIT)

Product code 01-104

Human citron kinase (CRK), catalytic domain [1-449 amino acids of accession number NP\_009105.1] was expressed as N-terminal GST fusion protein (77 kDa) using baculovirus expression system. GST-CRK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Histone H3 peptide  
 ATP ( $\mu$ M) Km app / Bin : 7.8 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 31  
 IC50 at 1 mM ATP (nM) : n.a.

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## CSK

Product code 08-111

Full-length human CSK [1-450(end) amino acids of accession number NP\_004374.1] was expressed as N-terminal GST-fusion protein (78 kDa) using baculovirus expression system. GST-CSK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 4.8 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 53  
 IC50 at 1 mM ATP (nM) : 1500

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## DAPK1

Product code 02-134

Human DAPK1, catalytic domain [1-289 amino acids of accession number NP\_004929.1] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-DAPK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DAPK1tide  
 ATP ( $\mu$ M) Km app / Bin : 1.1 / 1  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.9  
 IC50 at 1 mM ATP (nM) : 490

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## DCAMKL2

Product code 02-140

Truncated human DCAMKL2 [1-691 amino acids and Q353 deletion of accession number NP\_001035350.2] was expressed as N-terminal GST-fusion protein (103 kDa) using baculovirus expression system. GST-DCAMKL2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 120 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 22  
 IC50 at 1 mM ATP (nM) : n.a.

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## DDR1

Product code 08-113

Human DDR1, cytoplasmic domain [444-876(end) amino acids of accession number NP\_001945.3] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-DDR1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 94 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.0  
 IC50 at 1 mM ATP (nM) : 3.1

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## DDR2

Product code 08-114

Human DDR2, cytoplasmic domain [422-855(end) amino acids of accession number NP\_006173.2] was expressed as N-terminal GST-fusion protein (77 kDa) using baculovirus expression system. GST-DDR2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 38 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.2  
 IC50 at 1 mM ATP (nM) : 0.77

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## DYRK1A

Product code 04-130

Full-length human DYRK1A [1-763(end) amino acids of accession number NP\_001387.2] was expressed as N-terminal GST-fusion protein (112 kDa) using baculovirus expression system. GST-DYRK1A was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 7.8  
 IC50 at 1 mM ATP (nM) : 120

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## DYRK1B

Product code 04-131

Full-length human DYRK1B [1-629(end) amino acids of accession number NP\_004705.1] was expressed as N-terminal GST-fusion protein (96 kDa) using baculovirus expression system. GST-DYRK1B was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 59 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.2  
 IC50 at 1 mM ATP (nM) : 32



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## DYRK2

Product code [04-132](#)

Full-length human DYRK2 [1-528(end) amino acids of accession number NP\_003574.1] was expressed as N-terminal GST-fusion protein (87 kDa) using baculovirus expression system. GST-DYRK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 7.7 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 130  
 IC50 at 1 mM ATP (nM) : 6300

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## DYRK3

Product code [04-133](#)

Full-length human DYRK3 [1-588(end) amino acids of accession number NP\_003573.2] was expressed as N-terminal GST-fusion protein (93 kDa) using baculovirus expression system. GST-DYRK3 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 6.8 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 17  
 IC50 at 1 mM ATP (nM) : 1200

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## EEF2K

Product code [10-113](#)

Full-length human EEF2K [1-725(end) amino acids of accession number NP\_037434.1] was expressed as N-terminal GST-fusion protein (109 kDa) using E. coli expression system. GST-EEF2K was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : EEF2Ktide  
 ATP ( $\mu$ M) Km app / Bin : 12 / 10  
 Metal : Mg  
 Reference compound : A-484954  
 IC50 at ATP Bin (nM) : 330  
 IC50 at 1 mM ATP (nM) : n.a.

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## EGFR

Product code [08-115](#)

Human EGFR, cytoplasmic domain [669-1210(end) amino acids of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 2.7 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 53  
 IC50 at 1 mM ATP (nM) : 7700

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## EGFR[C797S/L858R]

Product code [08-563](#)

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and C797S/L858R of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89kDa) using baculovirus expression system. GST-EGFR[C797S/L858R] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 4.1 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 8.8  
 IC50 at 1 mM ATP (nM) : 270

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## EGFR[d746-750]

Product code 08-527

Human EGFR, cytoplasmic domain [669-745, 751-1210(end) amino acids of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-EGFR[d746-750aa] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 19 / 25  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 13  
 IC50 at 1 mM ATP (nM) : 93

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## EGFR[d746-750/C797S]

Product code 08-564

Human EGFR, cytoplasmic domain [669-745, 751-1210(end) amino acids and C797S of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-EGFR[d746-750aa/C797S] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 8.2 / 10  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 8.0  
 IC50 at 1 mM ATP (nM) : 130

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## EGFR[d746-750/T790M]

Product code 08-528

Human EGFR, cytoplasmic domain [669-745, 751-1210(end) amino acids and T790M of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR [d746-750aa/T790M] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 5.4 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.52  
 IC50 at 1 mM ATP (nM) : 9.7

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## EGFR[d746-750/T790M/C797S]

Product code 08-565

Human EGFR, cytoplasmic domain [669-745, 751-1210(end) amino acids and T790M/C797S of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-EGFR[d746-750aa/T790M/C797S] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 1.8 / 2  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.84  
 IC50 at 1 mM ATP (nM) : 14

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## EGFR[D770\_N771insNPG]

Product code 08-553

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and D770\_N771insNPG of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[D770\_N771insNPG] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 2.3 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 18  
 IC50 at 1 mM ATP (nM) : 930

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## EGFR[L858R]

Product code 08-502

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and L858R of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[L858R] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 9.8 / 10  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 11  
 IC50 at 1 mM ATP (nM) : 360

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## EGFR[L861Q]

Product code 08-513

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and L861Q of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[L861Q] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 7.5 / 10  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 68  
 IC50 at 1 mM ATP (nM) : 2200

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## EGFR[T790M]

Product code 08-194

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and T790M of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[T790M] was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 0.9 / 1  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.8  
 IC50 at 1 mM ATP (nM) : 190

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## EGFR[T790M/C797S/L858R]

Product code 08-559

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and T790M/C797S/L858R of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[T790M/C797S/L858R] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 0.85 / n.a.  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : n.a.  
 IC50 at 1 mM ATP (nM) : 37

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## EGFR[T790M/L858R]

Product code 08-510

Human EGFR, cytoplasmic domain [669-1210(end) amino acids and T790M/L858R of accession number NP\_005219.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-EGFR[T790M/L858R] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 1.9 / 2  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 56

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## CGK2(PRKG2)

Product code 01-143

Full-length human CGK2 [1-762(end) amino acids of accession number NP\_006250.1] was expressed as N-terminal GST-fusion protein (114 kDa) using baculovirus expression system. GST-CGK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 24 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.88  
 IC50 at 1 mM ATP (nM) : n.a.

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## CK2 $\alpha$ 1/ $\beta$ (CSNK2A1/B)

Product code 05-184

Full-length human CK2 $\alpha$ 1 [1-391(end) amino acids of accession number NP\_001886.1] was co-expressed as N-terminal GST-fusion protein (72 kDa) with human His-tagged CK2 $\beta$  [1-215 amino acids of accession number NP\_001311.3] using baculovirus expression system. GST-CK2 $\alpha$ 1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CK2tide  
 ATP ( $\mu$ M) Km app / Bin : 2.9 / 5  
 Metal : Mg  
 Reference compound : TBB  
 IC50 at ATP Bin (nM) : 60  
 IC50 at 1 mM ATP (nM) : 4800

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## EPHA1

Product code 08-119

Human EPHA1, cytoplasmic domain [586-976(end) amino acids of accession number NP\_005223.3] was expressed as N-terminal GST-fusion protein (71 kDa) using baculovirus expression system. GST-EPHA1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 22 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 20  
 IC50 at 1 mM ATP (nM) : 340

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## EPHA2

Product code 08-121

Human EPHA2, cytoplasmic domain [572-976(end) amino acids of accession number NP\_004422.2] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-EPHA2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 67 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 160  
 IC50 at 1 mM ATP (nM) : 530

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## EPHA3

Product code 08-122

Human EPHA3, cytoplasmic domain [579-983(end) amino acids of accession number NP\_005224.2] was expressed as N-terminal GST-fusion protein (72 kDa) using baculovirus expression system. GST-EPHA3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 170 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 37  
 IC50 at 1 mM ATP (nM) : 76

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## EPHA4

Product code 08-123

Human EPHA4, cytoplasmic domain [586-986(end) amino acids of accession number NP\_004429.1] was expressed as N-terminal GST-fusion protein (72 kDa) using baculovirus expression system. GST-EPHA4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 52 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 50  
 IC50 at 1 mM ATP (nM) : 330

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## EPHA5

Product code 08-124

Human EPHA5, catalytic domain [662-948 amino acids of accession number NP\_004430.3] was expressed as N-terminal GST-fusion protein (59 kDa) using baculovirus expression system. GST-EPHA5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 56 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 34  
 IC50 at 1 mM ATP (nM) : 220

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## EPHA6

Product code 08-125

Human EPHA6, cytoplasmic domain [683-1130(end) amino acids of accession number NP\_001073917.2] was expressed as N-terminal GST-fusion protein (77 kDa) using baculovirus expression system. GST-EPHA6 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 17  
 IC50 at 1 mM ATP (nM) : 60

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## EPHA7

Product code 08-126

Human EPHA7, cytoplasmic domain [595-998(end) amino acids of accession number NP\_004431.1] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-EPHA7 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 58 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 48  
 IC50 at 1 mM ATP (nM) : 480

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## EPHA8

Product code 08-127

Human EPHA8, catalytic domain [571-924 amino acids of accession number NP\_065387.1] was expressed as N-terminal GST-fusion protein (67 kDa) using baculovirus expression system. GST-EPHA8 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 69 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 61  
 IC50 at 1 mM ATP (nM) : 240

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## EPHB1

Product code 08-128

Human EPHB1, cytoplasmic domain [578-984(end) amino acids of accession number NP\_004432.1] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-EPHB1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 29 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 53  
 IC50 at 1 mM ATP (nM) : 760

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## EPHB2

Product code 08-129

Human EPHB2, cytoplasmic domain [581-987(end) amino acids of accession number NP\_004433.2] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-EPHB2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 86 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 73  
 IC50 at 1 mM ATP (nM) : 400

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## EPHB3

Product code 08-130

Human EPHB3, cytoplasmic domain [596-998(end) amino acids of accession number NP\_004434.2] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-EPHB3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 49 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2000  
 IC50 at 1 mM ATP (nM) : >10000

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## EPHB4

Product code 08-131

Human EPHB4, cytoplasmic domain [577-987(end) amino acids of accession number NP\_004435.3] was expressed as N-terminal GST-protein (73 kDa) using baculovirus expression system. GST-EPHB4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 56 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 230  
 IC50 at 1 mM ATP (nM) : 1500

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## Erk1(MAPK3)

Product code 04-142

Full-length human Erk1 [1-379(end) amino acids of accession number NP\_002737.1] was expressed as N-terminal GST-fusion protein (70 kDa) using E.coli expression system. GST-Erk1 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K1. Activated GST-Erk1 was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 34 / 50  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 37  
 IC50 at 1 mM ATP (nM) : 400

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## Erk2(MAPK1)

Product code [04-143](#)

Full-length human Erk2 [1-360(end) amino acids of accession number NP\_002736.3] was expressed as N-terminal GST-fusion protein (69 kDa) using E.coli expression system. GST-Erk2 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K1. Activated GST-Erk2 was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 33 / 50  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 21  
 IC50 at 1 mM ATP (nM) : 180

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## Erk5(MAPK7)

Product code [04-146](#)

Human Erk5, catalytic domain [1-398 amino acids of accession number NP\_002740.2] was expressed as N-terminal GST-fusion protein (72 kDa) using E. coli expression system. GST-Erk5 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K5. Activated GST-Erk5 was purified using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : EGFR-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 450 / 1000  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 280  
 IC50 at 1 mM ATP (nM) : 280

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## FAK(PTK2)

Product code [08-137](#)

Truncated human FAK[376-1052(end) amino acids of accession number NP\_722560.1] was expressed as N-terminal GST-fusion protein (103 kDa) using baculovirus expression system. GST-FAK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 25 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 47  
 IC50 at 1 mM ATP (nM) : 230

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## FER

Product code [08-139](#)

Full-length human FER [1-822(end) amino acids of accession number NP\_005237.1] was expressed as N-terminal GST-fusion protein (122 kDa) using baculovirus expression system. GST-FER was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 26 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 12

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## FES

Product code [08-140](#)

Full-length human FES [1-413, 416-822(end) amino acids of accession number NP\_001996.1] was expressed as N-terminal GST-fusion protein (120 kDa) using baculovirus expression system. GST-FES was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 43 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.9  
 IC50 at 1 mM ATP (nM) : 25

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## FGFR1

Product code 08-133

Human FGFR1, cytoplasmic domain [398-822(end) amino acids of accession number NP\_075598.2] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-FGFR1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 89 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.3  
 IC50 at 1 mM ATP (nM) : 12

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## FGFR1[V561M]

Product code 08-536

Human FGFR1, cytoplasmic domain [398-822(end) amino acids and V561M of accession number NP\_075598.2] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-FGFR1[V561M] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 33 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.14  
 IC50 at 1 mM ATP (nM) : 1.3

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## FGFR2

Product code 08-134

Human FGFR2, cytoplasmic domain [399-821(end) amino acids of accession number NP\_000132.1] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-FGFR2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 66 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.4  
 IC50 at 1 mM ATP (nM) : 5.4

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## FGFR2[V564I]

Product code 08-546

Human FGFR2, cytoplasmic domain [399-821(end) amino acids and V564I of accession number NP\_000132] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-FGFR2[V564I] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 21 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.0  
 IC50 at 1 mM ATP (nM) : 47

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## FGFR3

Product code 08-135

Human FGFR3, cytoplasmic domain [436-806(end) amino acids of accession number NP\_000133.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-FGFR3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 43 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.6  
 IC50 at 1 mM ATP (nM) : 15



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## FGFR3[K650E]

Product code 08-501

Human FGFR3, cytoplasmic domain [436-806(end) amino acids and K650E of accession number NP\_000133.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-FGFR3[K650E] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 41 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.2  
 IC50 at 1 mM ATP (nM) : 14

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## FGFR3[K650M]

Product code 08-199

Human FGFR3, cytoplasmic domain [436-806(end) amino acids and K650M of accession number NP\_000133.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-FGFR3[K650M] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 17 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.68  
 IC50 at 1 mM ATP (nM) : 17

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## FGFR3[V555L]

Product code 08-548

Human FGFR3, cytoplasmic domain [436-806(end) amino acids and V555L of accession number NP\_000133.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-FGFR3[V555L] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 29 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.49  
 IC50 at 1 mM ATP (nM) : 9.4

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## FGFR3[V555M]

Product code 08-543

Human FGFR3, cytoplasmic domain [436-806(end) amino acids and V555M of accession number NP\_000133.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-FGFR3[V555M] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 37 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.21  
 IC50 at 1 mM ATP (nM) : 1.8

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## FGFR4

Product code 08-136

Human FGFR4, cytoplasmic domain [460-802(end) amino acids of accession number NP\_002002.3] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-FGFR4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 230 / 250  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 43  
 IC50 at 1 mM ATP (nM) : 120

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## FGFR4[N535K]

Product code 08-524

Human FGFR4, cytoplasmic domain [460-802(end) amino acids and N535K of accession number NP\_002002.3] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-FGFR4[N535K] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 30 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 160  
 IC50 at 1 mM ATP (nM) : 1200

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## FGFR4[V550E]

Product code 08-525

Human FGFR4, cytoplasmic domain [460-802(end) amino acids and V550E of accession number NP\_002002.3] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-FGFR4[V550E] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 210 / 200  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 370  
 IC50 at 1 mM ATP (nM) : 1300

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## FGFR4[V550L]

Product code 08-526

Human FGFR4, cytoplasmic domain [460-802(end) amino acids and V550L of accession number NP\_002002.3] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-FGFR4[V550L] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 160 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 10  
 IC50 at 1 mM ATP (nM) : 44

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## FGR

Product code 08-166

Full-length human FGR [1-529(end) amino acids of accession number NP\_005239.1] was expressed as N-terminal GST-fusion protein (86 kDa) using baculovirus expression system. GST-FGR was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 34 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.3  
 IC50 at 1 mM ATP (nM) : 16

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## FLT1

Product code 08-189

Human FLT1, cytoplasmic domain [781-1338(end) amino acids of accession number NP\_002010.1] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-FLT1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 140 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.2  
 IC50 at 1 mM ATP (nM) : 6.8

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## FLT3

Product code 08-154

Human FLT3, cytoplasmic domain [564-993(end) amino acids of accession number NP\_004110.2] was expressed as N-terminal GST-fusion protein (77 kDa) using baculovirus expression system. GST-FLT3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 94 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.20  
 IC50 at 1 mM ATP (nM) : 0.34

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## FLT4

Product code 08-190

Human FLT4, cytoplasmic domain [798-1298(end) amino acids of accession number NP\_002011.1] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-FLT4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 72 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.66  
 IC50 at 1 mM ATP (nM) : 2.4

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## FMS(CSF1R)

Product code 08-155

Human FMS, cytoplasmic domain [538-972(end) amino acids of accession number NP\_005202.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-FMS was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 26 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.26  
 IC50 at 1 mM ATP (nM) : 0.70

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## FRK

Product code 08-167

Human FRK, catalytic domain [223-505(end) amino acids of accession number NP\_002022.1] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-FRK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 62 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.4  
 IC50 at 1 mM ATP (nM) : 40

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## FYN[isoform a]

Product code 08-168

Full-length human FYN [isoform a] [1-537(end) amino acids of accession number NP\_002028.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-FYN [isoform a] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.9  
 IC50 at 1 mM ATP (nM) : 24

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## FYN[isoform b]

Product code 08-531

Full-length human FYN [isoform b] [1-534(end) amino acids of accession number NP\_694592.1] was expressed as N-terminal GST-fusion protein (87 kDa) using baculovirus expression system. GST-FYN [isoform b] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.8  
 IC50 at 1 mM ATP (nM) : 42

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## GSK3 $\alpha$ (GSK3A)

Product code 04-140

Full-length human GSK3 $\alpha$  [1-483(end) amino acids of accession number NP\_063937.2] was expressed as N-terminal GST-fusion protein (78 kDa) using baculovirus expression system. GST-GSK3 $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CREBtide-p  
 ATP ( $\mu$ M) Km app / Bin : 12 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 15  
 IC50 at 1 mM ATP (nM) : 400

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## GSK3 $\beta$ (GSK3B)

Product code 04-141

Full-length human GSK3 $\beta$  [1-420(end) amino acids of accession number NP\_001139628.1] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-GSK3 $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CREBtide-p  
 ATP ( $\mu$ M) Km app / Bin : 9.1 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 9.2  
 IC50 at 1 mM ATP (nM) : 240

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## Haspin(GSG2)

Product code 05-111

Full-length human Haspin [1-798(end) amino acids of accession number NP\_114171.2] was expressed as N-terminal GST-fusion protein (116 kDa) using baculovirus expression system. GST-Haspin was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Histone H3 peptide  
 ATP ( $\mu$ M) Km app / Bin : 140 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 5.8  
 IC50 at 1 mM ATP (nM) : n.a.

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## HCK

Product code 08-169

Truncated human HCK [25-526(end) amino acids of accession number NP\_002101.2] was expressed as N-terminal GST-fusion protein (84 kDa) using baculovirus expression system. GST-HCK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : 22

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## HER2(ERBB2)

Product code 08-016

Human HER2, cytoplasmic domain [676-1255(end) amino acids of accession number NP\_004439.1] was expressed as N-terminal His-tagged protein (67 kDa) using baculovirus expression system. His-tagged HER2 was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 3.5 / 5  
 Metal : Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 90  
 IC50 at 1 mM ATP (nM) : >10000

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## HER4(ERBB4)

Product code 08-118

Human HER4, cytoplasmic domain [676-1308(end) amino acids of accession number NP\_005226.1] was expressed as N-terminal GST-fusion protein (99 kDa) using baculovirus expression system. GST-HER4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 34  
 IC50 at 1 mM ATP (nM) : 1000

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## HGK(MAP4K4)

Product code 07-137

Human HGK, catalytic domain [1-328 amino acids of accession number NP\_004825.2] was expressed as N-terminal GST-fusion protein (64 kDa) using baculovirus expression system. GST-HGK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 9.4 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 23

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## HIPK1

Product code 04-135

Human HIPK1, catalytic domain [158-555 amino acids of accession number NP\_689909.2] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-HIPK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 4.4 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 570  
 IC50 at 1 mM ATP (nM) : n.a.

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## HIPK2

Product code 04-136

Full-length human HIPK2 [1-1198(end) amino acids of accession number NP\_073577.3] was expressed as N-terminal GST-fusion protein (158 kDa) using baculovirus expression system. GST-HIPK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 5.9 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 170  
 IC50 at 1 mM ATP (nM) : n.a.

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## HIPK3

Product code 04-137

Human HIPK3, catalytic domain [161-562 amino acids of accession number NP\_005725.3] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-HIPK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 7.3 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 120  
 IC50 at 1 mM ATP (nM) : >10000

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## HIPK4

Product code 04-138

Full-length human HIPK4 [1-616(end) amino acids of accession number NP\_653286.2] was expressed as N-terminal GST-fusion protein (96 kDa) using baculovirus expression system. GST-HIPK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 7 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 71  
 IC50 at 1 mM ATP (nM) : >10000

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## HPK1(MAP4K1)

Product code 07-410

Human HPK1, catalytic domain [1-346 amino acids of accession number NP\_009112.1] was expressed as N-terminal DYKDDDDK tagged protein (41 kDa) using baculovirus expression system. The protein was purified by using DYKDDDDK tag antibody agarose.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 22 / 25  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 6.9  
 IC50 at 1 mM ATP (nM) : n.a.

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## IGF1R

Product code 08-141

Human IGF1R, cytoplasmic domain [959-1367(end) amino acids of accession number NP\_000866.1] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-IGF1R was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 63 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 40  
 IC50 at 1 mM ATP (nM) : 150

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## IKK $\alpha$ (CHUK)

Product code 05-112

Full-length human IKK $\alpha$  [1-745(end) amino acids of accession number NP\_001269.3] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-IKK $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : IMAP  
 Substrate : IkBa peptide  
 ATP ( $\mu$ M) Km app / Bin : 41 / 40  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 310  
 IC50 at 1 mM ATP (nM) : n.a.

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## IKK $\beta$ (IKKBK)

Product code 05-084

Truncated human IKK $\beta$ [1-662 amino acids of accession number NP\_001547.1] was expressed as N-terminal His-tagged protein (77 kDa) using baculovirus expression system. His-tagged IKK $\beta$  was purified by using Ni-NTA affinity chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified I $\kappa$ B $\alpha$ -derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 410  
 IC50 at 1 mM ATP (nM) : >10000

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## IKK $\epsilon$ (IKBKE)

Product code 05-114

Full-length human IKK $\epsilon$  [1-716(end) amino acids of accession number NP\_054721.1] was expressed as N-terminal GST-fusion protein (108 kDa) using baculovirus expression system. GST-IKK $\epsilon$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : I $\kappa$ B $\alpha$  peptide  
 ATP ( $\mu$ M) Km app / Bin : 9.5 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.79  
 IC50 at 1 mM ATP (nM) : n.a.

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## INSR

Product code 08-142

Human INSR, catalytic domain [1005-1310 amino acids of accession number NP\_000199.1] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-INSR was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 58 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 12  
 IC50 at 1 mM ATP (nM) : 70

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## IRAK1

Product code 09-101

Truncated human IRAK1 [194-712(end) amino acids of accession number NP\_001560.2] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-IRAK1 was purified by using glutathione sepharose chromatography.

Assay platform : IMAP  
 Substrate : SRPKtide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 54  
 IC50 at 1 mM ATP (nM) : n.a.

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## IRAK4

Product code 09-145

Full-length human IRAK4 [1-460(end) amino acids of accession number NP\_057207.2] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-IRAK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRAK1 peptide  
 ATP ( $\mu$ M) Km app / Bin : 920 / 1000  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 11  
 IC50 at 1 mM ATP (nM) : 11

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## IRR(INSRR)

Product code 08-143

Human IRR, cytoplasmic domain [953-1297(end) amino acids of accession number NP\_055030.1] was expressed as N-terminal GST-fusion protein (66 kDa) using baculovirus expression system. GST-IRR was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 64 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 15  
 IC50 at 1 mM ATP (nM) : 98

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## ITK

Product code 08-181

Full-length human ITK [2-620(end) amino acids of accession number NP\_005537.3] was expressed as N-terminal GST-fusion protein (99 kDa) using baculovirus expression system. GST-ITK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 6.1 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.2  
 IC50 at 1 mM ATP (nM) : 200

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## JAK1

Product code 08-144

Human JAK1, catalytic domain [850-1154(end) amino acids of accession number NP\_002218.2] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-JAK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : JAK1 substrate peptide  
 ATP ( $\mu$ M) Km app / Bin : 68 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.71  
 IC50 at 1 mM ATP (nM) : 10

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## JAK2

Product code 08-045

Human JAK2, catalytic domain [826-1132(end) amino acids of accession number NP\_004963.1] was expressed as N-terminal His-tagged protein (39 kDa) using baculovirus expression system. His-tagged JAK2 was purified by using Ni-NTA affinity chromatography and gel filtration chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.34  
 IC50 at 1 mM ATP (nM) : 6.0

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## JAK3

Product code 08-046

Human JAK3, catalytic domain [795-1124(end) amino acids of accession number NP\_000206.2] was expressed as N-terminal His-tagged protein (41 kDa) using baculovirus expression system. His-tagged JAK3 was purified by using Ni-NTA affinity chromatography and gel filtration chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 3.5 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.20  
 IC50 at 1 mM ATP (nM) : 12



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## JNK1(MAPK8)

Product code 04-163

Human JNK1, catalytic domain [2-364 amino acids of accession number NP\_620634.1] was expressed as N-terminal GST-fusion protein (69 kDa) using E. coli expression system. GST-JNK1 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K4 and MAP2K7. Activated GST-JNK1 was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 29 / 100  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 99  
 IC50 at 1 mM ATP (nM) : 770

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## JNK2(MAPK9)

Product code 04-164

Human JNK2, catalytic domain [1-364 amino acids of accession number NP\_002743.3] was expressed as N-terminal GST-fusion protein (69 kDa) using E. coli expression system. GST-JNK2 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K4 and MAP2K7. Activated GST-JNK2 was purified using Ni-NTA chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 21 / 50  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 110  
 IC50 at 1 mM ATP (nM) : 1600

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## JNK3(MAPK10)

Product code 04-150

Full-length human JNK3 [1-426(end) amino acids of accession number NP\_620446.1] was expressed as N-terminal GST-fusion protein (75 kDa) using E.coli expression system. GST-JNK3 was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K4 and MAP2K7. Activated GST-JNK3 was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 6 / 25  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 26  
 IC50 at 1 mM ATP (nM) : 730

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## KDR

Product code 08-191

Human KDR, cytoplasmic domain [790-1356(end) amino acids of accession number NP\_002244.1] was expressed as N-terminal GST-fusion protein (90 kDa) using baculovirus expression system. GST-KDR was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 74 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.1  
 IC50 at 1 mM ATP (nM) : 13

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## KIT

Product code 08-156

Human KIT, cytoplasmic domain [544-976(end) amino acids of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 370 / 400  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.2  
 IC50 at 1 mM ATP (nM) : 2.0

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## KIT[D816E]

Product code 08-541

Human KIT, cytoplasmic domain [544-976(end) amino acids and D816E of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[D816E] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 40 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.7  
 IC50 at 1 mM ATP (nM) : 1.3

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## KIT[D816V]

Product code 08-505

Human KIT, cytoplasmic domain [544-976(end) amino acids and D816V of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[D816V] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.18  
 IC50 at 1 mM ATP (nM) : 2.8

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## KIT[D816Y]

Product code 08-534

Human KIT, cytoplasmic domain [544-976(end) amino acids and D816Y of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[D816Y] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 22 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.27  
 IC50 at 1 mM ATP (nM) : 2.1

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## KIT[T670I]

Product code 08-195

Human KIT, cytoplasmic domain [544-976(end) amino acids and T670I of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[T670I] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 100 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.80  
 IC50 at 1 mM ATP (nM) : 3.4

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## KIT[V560G]

Product code 08-504

Human KIT, cytoplasmic domain [544-976(end) amino acids and V560G of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[V560G] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 110 / 250  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.2  
 IC50 at 1 mM ATP (nM) : 1.6

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## KIT[V654A]

Product code 08-511

Human KIT, cytoplasmic domain [544-976(end) amino acids and V654A of accession number NP\_000213.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-KIT[V654A] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 220 / 250  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.5  
 IC50 at 1 mM ATP (nM) : 8.2

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## LATS2

Product code 01-124

Human LATS2, catalytic domain [553-1088(end) amino acids of accession number NP\_055387.2] was co-expressed as N-terminal GST-fusion protein (89 kDa) with human His-tagged MOBKL1A [1-216(end) amino acids of accession number NP\_775739.1] using baculovirus expression system. GST-LATS2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 380 / 400  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.6  
 IC50 at 1 mM ATP (nM) : 2.2

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## LCK

Product code 08-170

Full-length human LCK [1-509(end) amino acids of accession number NP\_005347.2] was expressed as N-terminal GST-fusion protein (85 kDa) using baculovirus expression system. GST-LCK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.5  
 IC50 at 1 mM ATP (nM) : 14

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## LOK(STK10)

Product code 07-315

Full-length human LOK [1-968(end) amino acids of accession number BAA35073.1] was expressed as N-terminal GST-fusion protein using baculovirus expression system. GST-LOK was purified by using glutathione sepharose chromatography. GST-LOK was cleaved by PreScission protease and GST-free LOK (114 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 100 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.49  
 IC50 at 1 mM ATP (nM) : n.a.

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## LTK

Product code 08-106

Human LTK, catalytic domain [498-796 amino acids of accession number NP\_002335.2] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-LTK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 49 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.0  
 IC50 at 1 mM ATP (nM) : 7.1

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## LYNa

Product code [08-171](#)

Full-length human LYNa [1-512(end) amino acids of accession number NP\_002341.1] was expressed as N-terminal GST-fusion protein (86 kDa) using baculovirus expression system. GST-LYNa was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.0  
 IC50 at 1 mM ATP (nM) : 22

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## LYNb

Product code [08-172](#)

Full-length human LYNb [1-491(end) amino acids of accession number NP\_001104567.1] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-LYNb was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 18 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.0  
 IC50 at 1 mM ATP (nM) : 21

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## MAP4K2

Product code [07-111](#)

Full-length human MAP4K2 [1-820(end) amino acid of accession number NP\_004570.2] was expressed as N-terminal GST-fusion protein (119 kDa) using baculovirus expression system. GST-MAP4K2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 93 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.3  
 IC50 at 1 mM ATP (nM) : n.a.

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## MAPKAPK2

Product code [02-142](#)

Full-length human MAPKAPK2 [1-400(end) amino acids of accession number NP\_116584.2] was co-expressed as N-terminal GST-fusion protein (73 kDa) with human His-tagged p38 $\beta$  [1-364(end) amino acids of accession number NP\_002742.3] and human His-tagged MAP2K6 [1-334(end) amino acids of accession number NP\_002749.2] using baculovirus expression system. GST-MAPKAPK2 was purified by using glutathione sepharose chromatography and Ni-NTA chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 3.6 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 80  
 IC50 at 1 mM ATP (nM) : 9300

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## MAPKAPK3

Product code [02-143](#)

Full-length human MAPKAPK3 [1-382(end) amino acids of accession number NP\_004626.1] was co-expressed as N-terminal GST-fusion protein (70 kDa) with human His-tagged p38 $\beta$  [1-364(end) amino acids of accession number NP\_002742.3] and human His-tagged MAP2K6 [1-334(end) amino acids of accession number NP\_002749.2] using baculovirus expression system. GST-MAPKAPK3 was purified by using glutathione sepharose chromatography and Ni-NTA chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 410  
 IC50 at 1 mM ATP (nM) : n.a.

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## MAPKAPK5

Product code 02-144

Full-length human MAPKAPK5 [1-471(end) amino acids of accession number NP\_003659.2] was co-expressed as N-terminal GST-fusion protein (81 kDa) with human His-tagged p38 $\beta$  [1-364(end) amino acids of accession number NP\_002742.3] and human His-tagged MAP2K6 [1-334(end) amino acids of accession number NP\_002749] using baculovirus expression system. GST-MAPKAPK5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 12 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 320  
 IC50 at 1 mM ATP (nM) : n.a.

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## MARK1

Product code 02-120

Full-length human MARK1 [1-795(end) amino acids of accession number AAF72103.1] was expressed as N-terminal GST-fusion protein (116 kDa) using baculovirus expression system. GST-MARK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 8 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.17  
 IC50 at 1 mM ATP (nM) : n.a.

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## MARK2

Product code 02-121

Full-length human MARK2 [1-745(end) amino acids of accession number NP\_059672.2] was expressed as N-terminal GST-fusion protein (110 kDa) using baculovirus expression system. GST-MARK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 8.8 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.12  
 IC50 at 1 mM ATP (nM) : n.a.

---

## MARK3

Product code 02-122

Full-length human MARK3 [1-729(end) amino acids of accession number NP\_002367.4] was expressed as N-terminal GST-fusion protein (108 kDa) using baculovirus expression system. GST-MARK3 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 5 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.20  
 IC50 at 1 mM ATP (nM) : n.a.

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## MARK4

Product code 02-123

Full-length human MARK4 [1-688(end) amino acids of accession number NP\_113605.2] was expressed as N-terminal GST-fusion protein (103 kDa) using baculovirus expression system. GST-MARK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 12 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.12  
 IC50 at 1 mM ATP (nM) : 5.6

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## MELK

Product code 02-124

Truncated human MELK [1-493 amino acids of accession number NP\_055606.1] was expressed as N-terminal GST-fusion protein (83 kDa) using E. coli expression system. GST-MELK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 38 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.81  
 IC50 at 1 mM ATP (nM) : n.a.

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## MER(MERTK)

Product code 08-108

Human MER, cytoplasmic domain [528-999(end) amino acids of accession number NP\_006334.2] was expressed as N-terminal GST-fusion protein (80 kDa) using baculovirus expression system. GST-MER was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.61  
 IC50 at 1 mM ATP (nM) : 5.3

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## MET

Product code 08-151

Human MET, cytoplasmic domain [956-1390(end) amino acids of accession number NP\_000236.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-MET was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 67  
 IC50 at 1 mM ATP (nM) : 730

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## MET[D1228H]

Product code 08-540

Human MET, cytoplasmic domain [956-1390(end) amino acids and D1228H of accession number NP\_000236.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-MET[D1228H] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 25 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 59  
 IC50 at 1 mM ATP (nM) : 1200

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## MET[M1250T]

Product code 08-545

Human MET, cytoplasmic domain [956-1390(end) amino acids and M1250T of accession number NP\_000236.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-MET[M1250T] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 17 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 86  
 IC50 at 1 mM ATP (nM) : 1900

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## MET[Y1235D]

Product code 08-198

Human MET, cytoplasmic domain [956-1390(end) amino acids and Y1235D of accession number NP\_000236.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-MET[Y1235D] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 71 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 79  
 IC50 at 1 mM ATP (nM) : 390

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## MINK(MINK1)

Product code 07-139

Human MINK, catalytic domain [1-314 amino acids of accession number NP\_056531.1] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-MINK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 50  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 5.5  
 IC50 at 1 mM ATP (nM) : 4.7

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## MNK1(MKNK1)

Product code 02-145

Full-length human MNK1 [1-424(end) amino acids and T344D of accession number NP\_001129025.1] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-MNK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : RS peptide  
 ATP ( $\mu$ M) Km app / Bin : 460 / 450  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 21  
 IC50 at 1 mM ATP (nM) : n.a.

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## MNK2(MKNK2)

Product code 02-146

Full-length human MNK2 [1-465(end) amino acids and T379D of accession number NP\_951009.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-MNK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : RS peptide  
 ATP ( $\mu$ M) Km app / Bin : 110 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 7.5  
 IC50 at 1 mM ATP (nM) : 44

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## MRCK $\alpha$ (CDC42BPA)

Product code 01-107

Truncated human MRCK $\alpha$  [1-574 amino acids of accession number NP\_003598.2] was expressed as N-terminal GST-fusion protein (93 kDa) using baculovirus expression system. GST-MRCK $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DAPK1tide  
 ATP ( $\mu$ M) Km app / Bin : 0.45 / 1  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.2  
 IC50 at 1 mM ATP (nM) : n.a.

---

## MRCK $\beta$ (CDC42BPB)

Product code 01-108

Truncated human MRCK $\beta$  [1-473 amino acids of accession number NP\_006026.3] was expressed as N-terminal GST-fusion protein (82 kDa) using baculovirus expression system. GST-MRCK $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DAPK1tide  
 ATP ( $\mu$ M) Km app / Bin : 0.67 / 1  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.6  
 IC50 at 1 mM ATP (nM) : n.a.

---

## MSK1(RPS6KA5)

Product code 01-147

Full-length human MSK1 [1-802(end) amino acids of accession number NP\_004746.2] was co-expressed as N-terminal GST-fusion protein (117 kDa) with human His-tagged Erk2 [1-360 amino acids of accession number NP\_002736.3] using baculovirus expression system. GST-MSK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Crosstide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.6  
 IC50 at 1 mM ATP (nM) : n.a.

---

## MSK2(RPS6KA4)

Product code 01-148

Full-length human MSK2 [1-772(end) amino acids of accession number NP\_003933.1] was co-expressed as N-terminal GST-fusion protein (114 kDa) with human His-tagged Erk2 [1-360 amino acids of accession number NP\_002736.3] using baculovirus expression system. GST-MSK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Crosstide  
 ATP ( $\mu$ M) Km app / Bin : 40 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.3  
 IC50 at 1 mM ATP (nM) : n.a.

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## MSSK1(STK23)

Product code 04-159

Full-length human MSSK1 [1-567(end) amino acids of accession number NP\_055185.2] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-MSSK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 56 / 50  
 Metal : Mg  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 220  
 IC50 at 1 mM ATP (nM) : n.a.

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## MST1(STK4)

Product code 07-116

Full-length human MST1 [1-487(end) amino acids of accession number NP\_006273.1] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-MST1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 50 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 0.55



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## MST2(STK3)

Product code [07-117](#)

Full-length human MST2 [1-491(end) amino acids of accession number NP\_006272.2] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-MST2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 69 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 6.7  
 IC50 at 1 mM ATP (nM) : 3.1

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## MST3(STK24)

Product code [07-118](#)

Full-length human MST3 [1-431(end) amino acids of accession number NP\_001027467.2] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-MST3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 66 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.9  
 IC50 at 1 mM ATP (nM) : n.a.

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## MST4

Product code [07-119](#)

Full-length human MST4 [1-416(end) amino acids of accession number NP\_057626.2] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-MST4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 76 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 6.3  
 IC50 at 1 mM ATP (nM) : n.a.

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## MUSK

Product code [08-153](#)

Human MUSK, catalytic domain [527-869(end) amino acids of accession number NP\_005583.1] was expressed as N-terminal GST fusion protein (66 kDa) using baculovirus expression system. GST-MUSK was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.1  
 IC50 at 1 mM ATP (nM) : 2.6

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## NDR1(STK38)

Product code [01-125](#)

Full-length human NDR1[1-465(end) amino acids of accession number NP\_009202.1] was co-expressed as N-terminal GST-fusion protein (81kDa) with human His-tagged MOBKL1A [1-216(end) amino acids of accession number NP\_775739.1] using baculovirus expression system. GST-NDR1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 12 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.8  
 IC50 at 1 mM ATP (nM) : n.a.

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## NDR2(STK38L)

Product code 01-126

Full-length human NDR2 [1-464(end) amino acids of accession number NP\_055815.1] was co-expressed as N-terminal GST-fusion protein (81 kDa) with human His-tagged MOBKL1A [1-216(end) amino acids of accession number NP\_775739.1] using baculovirus expression system. GST-NDR2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 7.6 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.1  
 IC50 at 1 mM ATP (nM) : n.a.

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## NEK1

Product code 05-123

Human NEK1, catalytic domain [1-505 amino acids of accession number NP\_036356.1] was expressed as N-terminal GST-fusion protein (85 kDa) using baculovirus expression system. GST-NEK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK7 peptide  
 ATP ( $\mu$ M) Km app / Bin : 64 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 51  
 IC50 at 1 mM ATP (nM) : 650

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## NEK2

Product code 05-226

Full-length human NEK2 [1-445(end) amino acids of accession number NP\_002488.1] was expressed as N-terminal His-tagged protein (55 kDa) using baculovirus expression system. His-tagged NEK2 was purified by using Ni-NTA affinity chromatography. Purified His-NEK2 was digested by recombinant His-TEV protease, and His-tag free NEK2 (ca. 52 kDa) was collected as flow-through fraction from Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK7 peptide  
 ATP ( $\mu$ M) Km app / Bin : 65 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3700  
 IC50 at 1 mM ATP (nM) : >10000

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## NEK4

Product code 05-128

Full-length human NEK4 [1-841(end) amino acids of accession number NP\_003148.2] was expressed as N-terminal GST-fusion protein (122 kDa) using baculovirus expression system. GST-NEK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 51 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 120  
 IC50 at 1 mM ATP (nM) : n.a.

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## NEK6

Product code 05-130

Full-length human NEK6 [1-313(end) amino acids of accession number NP\_055212.2] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-NEK6 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK7 peptide  
 ATP ( $\mu$ M) Km app / Bin : 69 / 75  
 Metal : Mg  
 Reference compound : PKR Inhibitor  
 IC50 at ATP Bin (nM) : 19000  
 IC50 at 1 mM ATP (nM) : >10000

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## NEK7

Product code 05-131

Full-length human NEK7 [1-302(end) amino acids of accession number NP\_598001.1] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-NEK7 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK7 peptide  
 ATP ( $\mu$ M) Km app / Bin : 40 / 50  
 Metal : Mg  
 Reference compound : PKR Inhibitor  
 IC50 at ATP Bin (nM) : 8500  
 IC50 at 1 mM ATP (nM) : >10000

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## NEK9

Product code 05-133

Truncated human NEK9 [1-346, 733-979(end) amino acids of accession number NP\_149107.4] was expressed as N-terminal GST-fusion protein (93 kDa) using baculovirus expression system. GST-NEK9 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDK7 peptide  
 ATP ( $\mu$ M) Km app / Bin : 190 / 200  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 150  
 IC50 at 1 mM ATP (nM) : 400

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## NIM1K(MGC42105)

Product code 02-175

Full-length human NIM1K [1-436(end) amino acids of accession number NP\_699192.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-NIM1K was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 21 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 300  
 IC50 at 1 mM ATP (nM) : n.a.

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## Nuak1

Product code 02-126

Full-length human Nuak1 [1-661(end) amino acids of accession number NP\_055655.1] was expressed as N-terminal GST-fusion protein (102 kDa) using baculovirus expression system. GST-Nuak1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 59 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 3.4

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## NuaK2

Product code 02-127

Full-length human NuaK2 [1-628(end) amino acids of accession number NP\_112214.1] was expressed as N-terminal GST-fusion protein (98kDa) using baculovirus expression system. GST-NuaK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CHKtide  
 ATP ( $\mu$ M) Km app / Bin : 26 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.2  
 IC50 at 1 mM ATP (nM) : 2.3

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## p38 $\alpha$ (MAPK14)

Product code [04-152](#)

Truncated human p38 $\alpha$  [9-352 amino acids of accession number NP\_620581.1] was expressed as N-terminal GST-fusion protein (66 kDa) using E. coli expression system. GST-p38 $\alpha$  was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38 $\alpha$  was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 150 / 150  
 Metal : Mg  
 Reference compound : SB202190  
 IC50 at ATP Bin (nM) : 6.3  
 IC50 at 1 mM ATP (nM) : 22

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## p38 $\beta$ (MAPK11)

Product code [04-153](#)

Full-length human p38 $\beta$ [1-364(end) amino acids of accession number NP\_002742.3] was expressed as N-terminal GST-fusion protein (69 kDa) using E. coli expression system. GST-p38 $\beta$  was purified by using glutathione chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 63 / 75  
 Metal : Mg  
 Reference compound : SB202190  
 IC50 at ATP Bin (nM) : 16  
 IC50 at 1 mM ATP (nM) : 110

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## p38 $\gamma$ (MAPK12)

Product code [04-155](#)

Full-length human p38 $\gamma$  [1-367(end) amino acids of accession number NP\_002960.2] was expressed as N-terminal GST-fusion protein (69 kDa) using E. coli expression system. GST-p38 $\gamma$  was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38 $\gamma$  was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 88  
 IC50 at 1 mM ATP (nM) : 2800

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## p38 $\delta$ (MAPK13)

Product code [04-154](#)

Full-length human p38 $\delta$  [1-365(end) amino acids of accession number NP\_002745.1] was expressed as N-terminal GST-fusion protein (69 kDa) using E. coli expression system. GST-p38 $\delta$  was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38 $\delta$  was purified using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Modified Erktide  
 ATP ( $\mu$ M) Km app / Bin : 5.8 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 220  
 IC50 at 1 mM ATP (nM) : >10000

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## p70S6K(RPS6KB1)

Product code [01-154](#)

Human p70S6K, catalytic domain [1-421 amino acids and T412E of accession number NP\_003152.1] was expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-p70S6K was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.1  
 IC50 at 1 mM ATP (nM) : 9.8

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## **p70S6K $\beta$ (RPS6KB2)**

Product code 01-155

Full-length human p70S6K $\beta$  [1-482(end) amino acids of accession number NP\_003943.2] was expressed as N-terminal GST-fusion protein (81 kDa) using baculovirus expression system. GST-p70S6K $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 3.3 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.7  
 IC50 at 1 mM ATP (nM) : n.a.

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## **PAK1**

Product code 07-123

Full-length human PAK1 [1-545(end) amino acids of accession number NP\_002567.3] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-PAK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : LIMKtide  
 ATP ( $\mu$ M) Km app / Bin : 300 / 300  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.0  
 IC50 at 1 mM ATP (nM) : 11

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## **PAK2**

Product code 07-124

Full-length human PAK2 [1-524(end) amino acids of accession number NP\_002568.2] was expressed as N-terminal GST-fusion protein (85 kDa) using baculovirus expression system. GST-PAK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DAPK1tide  
 ATP ( $\mu$ M) Km app / Bin : 81 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.5  
 IC50 at 1 mM ATP (nM) : 22

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## **PAK4**

Product code 07-126

Full-length human PAK4 [1-591(end) amino acids of accession number NP\_005875.1] was expressed as N-terminal GST-fusion protein (91 kDa) using baculovirus expression system. GST-PAK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 2.5 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 12  
 IC50 at 1 mM ATP (nM) : n.a.

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## **PAK5(PAK7)**

Product code 07-127

Human PAK5, catalytic domain [425-719(end) amino acids of accession number NP\_065074.1] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-PAK5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DAPK1tide  
 ATP ( $\mu$ M) Km app / Bin : 1.9 / 1  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.5  
 IC50 at 1 mM ATP (nM) : 290

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## PAK6

Product code 07-128

Full-length human PAK6 [1-681(end) amino acids of accession number NP\_064553.1] was expressed as N-terminal GST-fusion protein (102 kDa) using baculovirus expression system. GST-PAK6 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 3.7 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.2  
 IC50 at 1 mM ATP (nM) : n.a.

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## PASK

Product code 02-128

Human PASK, catalytic domain [949-1323(end) amino acids of accession number NP\_055963.2] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-PASK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 9.7 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 13  
 IC50 at 1 mM ATP (nM) : 190

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## PBK

Product code 05-168

Full-length human PBK [1-322(end) amino acids of accession number NP\_060962.2] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-PBK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Histone H3 peptide  
 ATP ( $\mu$ M) Km app / Bin : 33 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 69  
 IC50 at 1 mM ATP (nM) : 720

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## PDGFR $\alpha$ (PDGFRA)

Product code 08-157

Human PDGFR $\alpha$ , cytoplasmic domain [550-1089(end) amino acids of accession number NP\_006197.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-PDGFR $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 28 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.30  
 IC50 at 1 mM ATP (nM) : 1.4

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## PDGFR $\alpha$ (PDGFRA)[D842V]

Product code 08-506

Human PDGFR $\alpha$ , cytoplasmic domain [550-1089(end) amino acids and D842V of accession number NP\_006197.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-PDGFR $\alpha$ [D842V] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 21 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.25  
 IC50 at 1 mM ATP (nM) : 1.9

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## PDGFR $\alpha$ (PDGFRA)[T674I]

Product code 08-503

Human PDGFR $\alpha$ , cytoplasmic domain [550-1089(end) amino acids and T674I of accession number NP\_006197.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-PDGFR $\alpha$ [T674I] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.12  
 IC50 at 1 mM ATP (nM) : 1.1

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## PDGFR $\alpha$ (PDGFRA)[V561D]

Product code 08-507

Human PDGFR $\alpha$ , cytoplasmic domain [550-1089(end) amino acids and V561D of accession number NP\_006197.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-PDGFR $\alpha$ [V561D] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 35 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.32  
 IC50 at 1 mM ATP (nM) : 1.6

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## PDGFR $\beta$ (PDGFRB)

Product code 08-158

Human PDGFR $\beta$ , cytoplasmic domain [557-1106(end) amino acids of accession number NP\_002600.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-PDGFR $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 23 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.27  
 IC50 at 1 mM ATP (nM) : 0.62

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## PDHK2(PDK2)

Product code 10-140

Full-length human PDHK2 [1-407(end) amino acids of accession number NP\_002602.2] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-PDHK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PDHKtide  
 ATP ( $\mu$ M) Km app / Bin : 28 / 25  
 Metal : Mg+K  
 Reference compound : DCA  
 IC50 at ATP Bin (nM) : 610000  
 IC50 at 1 mM ATP (nM) : n.a.

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## PDHK4(PDK4)

Product code 10-125

Full-length human PDHK4 [1-411(end) amino acids of accession number NP\_002603.1] was expressed as N-terminal GST-fusion protein (73 kDa) using E.coli expression system. GST-PDHK4 was purified by using glutathione affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PDHKtide  
 ATP ( $\mu$ M) Km app / Bin : 19 / 25  
 Metal : Mg+K  
 Reference compound : DCA  
 IC50 at ATP Bin (nM) : 75000  
 IC50 at 1 mM ATP (nM) : n.a.

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## PDK1(PDPK1)

Product code 01-132

Full-length human PDK1 [1-556(end) amino acids of accession number NP\_002604.1] was expressed as N-terminal GST-fusion protein (91 kDa) using baculovirus expression system. GST-PDK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : T308tide  
 ATP ( $\mu$ M) Km app / Bin : 9.6 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 9.2  
 IC50 at 1 mM ATP (nM) : 12

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## PEK(EIF2AK3)

Product code 05-155

Human PEK, cytoplasmic domain [536-1116(end) amino acids of accession number NP\_004827.3] was expressed as N-terminal GST-fusion protein (94 kDa) using E.coli expression system. GST-PEK was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : IMAP  
 Substrate : SRPKtide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3600  
 IC50 at 1 mM ATP (nM) : n.a.

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## PGK(PRKG1)

Product code 01-142

Full-length human PGK [1-686(end) amino acids of accession number NP\_006249.1] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-PGK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 8.2 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.1  
 IC50 at 1 mM ATP (nM) : n.a.

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## PHKG1

Product code 02-152

Full-length human PHKG1 [1-387(end) amino acids of accession number NP\_006204.1] was expressed as N-terminal GST-fusion protein (72 kDa) using baculovirus expression system. GST-PHKG1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 71 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.22  
 IC50 at 1 mM ATP (nM) : n.a.

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## PHKG2

Product code 02-153

Full-length human PHKG2 [1-406(end) amino acids of accession number NP\_000285.1] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-PHKG2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 8.1 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.74  
 IC50 at 1 mM ATP (nM) : n.a.



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## PIK3CA/PIK3R1

Product code [11-401-20N](#)

Full-length human PIK3CA[1-1068(end) amino acids of accession number NP\_006209.2] was co-expressed as N-terminal DYKDDDDK tagged, biotinylated protein (128 kDa) with PIK3R1[1-724(end) amino acids of accession number NP\_852664.1] using baculovirus expression system. The protein was purified by using DYKDDDDK tag antibody agarose.

Assay platform : ADP-Glo  
 Substrate : PI(4,5)P2  
 ATP ( $\mu$ M) Km app / Bin : 89 / 100  
 Metal : Mg  
 Reference compound : PI-103  
 IC50 at ATP Bin (nM) : 22  
 IC50 at 1 mM ATP (nM) : n.a.

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## PIK3CB/PIK3R1

Product code [11-402-20N](#)

Full-length human PIK3CB[1-1070(end) amino acids of accession number NP\_006210.1] was co-expressed as N-terminal DYKDDDDK tagged, biotinylated protein (126 kDa) with PIK3R1[1-724(end) amino acids of accession number NP\_852664.1] (84kDa) using baculovirus expression system. The protein was purified by using DYKDDDDK tag antibody agarose.

Assay platform : ADP-Glo  
 Substrate : PI(4,5)P2  
 ATP ( $\mu$ M) Km app / Bin : 88 / 100  
 Metal : Mg  
 Reference compound : PI-103  
 IC50 at ATP Bin (nM) : 22  
 IC50 at 1 mM ATP (nM) : n.a.

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## PIK3CD/PIK3R1

Product code [11-403-20N](#)

Full-length human PIK3CD[1-1044(end) amino acids of accession number NP\_005017.3] was co-expressed as N-terminal DYKDDDDK tagged, biotinylated protein (123 kDa) with PIK3R1[1-724(end) amino acids of accession number NP\_852664.1] (84kDa) using baculovirus expression system. The protein was purified by using DYKDDDDK tag antibody agarose.

Assay platform : ADP-Glo  
 Substrate : PI(4,5)P2  
 ATP ( $\mu$ M) Km app / Bin : 37 / 50  
 Metal : Mg  
 Reference compound : PI-103  
 IC50 at ATP Bin (nM) : 24  
 IC50 at 1 mM ATP (nM) : n.a.

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## PIKFYVE(PIP5K3)

Product code [11-118](#)

Full-length human PIKFYVE [1-2098(end) amino acids and S696N, L932S, Q995L, T998S, S1033A and Q1183K of accession number NP\_055855.2] was expressed as N-terminal GST-fusion protein (265 kDa) using baculovirus expression system. GST-PIKFYVE was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(3)P  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 3900  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIM1

Product code [02-054](#)

Full-length human PIM1 [1-313(end) amino acids of accession number NP\_002639.1] was expressed as N-terminal His-tagged protein (39 kDa) using baculovirus expression system. His-tagged PIM1 was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 640 / 500  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 10  
 IC50 at 1 mM ATP (nM) : 20

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## PIM2

Product code 02-155

Full-length human PIM2 [1-311(end) amino acids of accession number NP\_006866.2] was expressed as N-terminal GST-fusion protein (61 kDa) using baculovirus expression system. GST-PIM2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 4 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 14  
 IC50 at 1 mM ATP (nM) : 480

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## PIM3

Product code 02-156

Full-length human PIM3 [1-326(end) amino acids of accession number NP\_001001852.1] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-PIM3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 130 / 150  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.36  
 IC50 at 1 mM ATP (nM) : 0.71

---

## PIP4K2A

Product code 11-115

Full-length human PIP4K2A [1-406(end) amino acids of accession number NP\_005019] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-PIP4K2A was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(5)P  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 7600  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIP4K2B

Product code 11-116

Full-length human PIP4K2B [1-416(end) amino acids of accession number NP\_003550] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-PIP4K2B was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(5)P  
 ATP ( $\mu$ M) Km app / Bin : 18 / 25  
 Metal : Mn  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 48000  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIP5K1A

Product code 11-111

Full-length human PIP5K1A [1-549(end) amino acids of accession number NP\_003548.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-PIP5K1A was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(4)P  
 ATP ( $\mu$ M) Km app / Bin : 28 / 25  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 10000  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIP5K1B

Product code 11-112

Full-length human PIP5K1B [1-540(end) amino acids of accession number NP\_003549.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-PIP5K1B was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(4)P  
 ATP ( $\mu$ M) Km app / Bin : 95 / 100  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 4300  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIP5K1C

Product code 11-113

Full-length human PIP5K1C [1-668(end) amino acids of accession number NP\_036530] was expressed as N-terminal GST-fusion protein (101 kDa) using baculovirus expression system. GST-PIP5K1C was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(4)P  
 ATP ( $\mu$ M) Km app / Bin : 33 / 50  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 1900  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PIP5KL1

Product code 11-114

Full-length human PIP5KL1 [1-394(end) amino acids of accession number NP\_001128691.1] was expressed as N-terminal GST-fusion protein (72 kDa) using baculovirus expression system. GST-PIP5KL1 was purified by using glutathione sepharose chromatography.

Assay platform : ADP-Glo  
 Substrate : PI(4)P  
 ATP ( $\mu$ M) Km app / Bin : 1 / 1  
 Metal : Mg  
 Reference compound : AG-183  
 IC50 at ATP Bin (nM) : 2200  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKAC $\alpha$ (PRKACA)

Product code 01-127

Full-length human PKAC $\alpha$  [1-351(end) amino acids of accession number NP\_002721.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-PKAC $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 2.6 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.80  
 IC50 at 1 mM ATP (nM) : 86

---

## PKAC $\beta$ (PRKACB)

Product code 01-128

Full-length human PKAC $\beta$  [1-351(end) amino acids of accession number NP\_002722.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-PKAC $\beta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 4.7 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKAC $\gamma$ (PRKACG)

Product code [01-129](#)

Full-length human PKAC $\gamma$  [1-351(end) amino acids of accession number NP\_002723.2] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-PKAC $\gamma$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 4.5 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 3.1  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKC $\alpha$ (PRKCA)

Product code [01-133](#)

Full-length human PKC $\alpha$  [1-672(end) amino acids of accession number NP\_002728.1] was expressed as N-terminal GST-fusion protein (104 kDa) using baculovirus expression system. GST-PKC $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg+Ca  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.33  
 IC50 at 1 mM ATP (nM) : 3.6

---

## PKC $\beta$ 1(PRKCB1)

Product code [01-134](#)

Full-length human PKC $\beta$ 1 [1-671(end) amino acids of accession number NP\_997700.1] was expressed as N-terminal GST-fusion protein (104 kDa) using baculovirus expression system. GST-PKC $\beta$ 1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 79 / 75  
 Metal : Mg+Ca  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.71  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKC $\beta$ 2(PRKCB2)

Product code [01-165](#)

Full-length human PKC $\beta$ 2 [1-673(end) amino acids of accession number NP\_002729.2] was expressed as N-terminal GST-fusion protein (104 kDa) using baculovirus expression system. GST-PKC $\beta$ 2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 41 / 50  
 Metal : Mg+Ca  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.43  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKC $\gamma$ (PRKCG)

Product code [01-137](#)

Full-length human PKC $\gamma$  [1-697(end) amino acids of accession number NP\_002730.1] was expressed as N-terminal GST-fusion protein (106 kDa) using baculovirus expression system. GST-PKC $\gamma$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 74 / 75  
 Metal : Mg+Ca  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : 11

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## PKC $\delta$ (PRKCD)

Product code 01-135

Full-length human PKC $\delta$  [1-676(end) amino acids of accession number NP\_006245.2] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-PKC $\delta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 26 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.22  
 IC50 at 1 mM ATP (nM) : n.a.

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## PKC $\epsilon$ (PRKCE)

Product code 01-136

Full-length human PKC $\epsilon$  [1-737(end) amino acids of accession number NP\_005391.1] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-PKC $\epsilon$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.56  
 IC50 at 1 mM ATP (nM) : 5.6

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## PKC $\zeta$ (PRKCZ)

Product code 01-141

Full-length human PKC $\zeta$  [1-592(end) amino acids of accession number NP\_002735.3] was expressed as N-terminal GST-fusion protein (94kDa) using baculovirus expression system. GST-PKC $\zeta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 55  
 IC50 at 1 mM ATP (nM) : n.a.

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## PKC $\eta$ (PRKCH)

Product code 01-138

Full-length human PKC $\eta$  [1-683(end) amino acids of accession number NP\_006246.2] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-PKC $\eta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.92  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKC $\theta$ (PRKCQ)

Product code 01-140

Full-length human PKC $\theta$  [1-706(end) amino acids of accession number NP\_006248.1] was expressed as N-terminal GST-fusion protein (109 kDa) using baculovirus expression system. GST-PKC $\theta$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 18 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.72  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKC $\alpha$ (PRKCI)

Product code 01-139

Full-length human PKC $\alpha$ [1-587(end) amino acids of accession number NP\_002731.3] was expressed as N-terminal GST-fusion protein (94 kDa) using baculovirus expression system. GST-PKC $\alpha$  was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : PKC peptide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 13  
 IC50 at 1 mM ATP (nM) : n.a.

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## PKD1(PRKD1)

Product code 02-157

Full-length human PKD1 [1-912(end) amino acids of accession number NP\_002733.1] was expressed as N-terminal GST-fusion protein (129 kDa) using baculovirus expression system. GST-PKD1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 25 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKD2(PRKD2)

Product code 02-158

Full-length human PKD2 [1-878(end) amino acids of accession number NP\_057541.2] was expressed as N-terminal GST-fusion protein (124 kDa) using baculovirus expression system. GST-PKD2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 26 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : 16

---

## PKD3(PRKD3)

Product code 02-159

Full-length human PKD3 [1-890(end) amino acids of accession number NP\_005804.1] was expressed as N-terminal GST-fusion protein (127 kDa) using baculovirus expression system. GST-PKD3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 34 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.80  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKN1

Product code 01-144

Full-length human PKN1 [1-942(end) amino acids of accession number NP\_002732.3] was expressed as N-terminal GST-fusion protein (132 kDa) using baculovirus expression system. GST-PKN1 was purified by using glutathione sepharose chromatography.

Assay platform : IMAP  
 Substrate : S6K peptide  
 ATP ( $\mu$ M) Km app / Bin : 19 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.15  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PKR(EIF2AK2)

Product code 05-156

Human PKR, catalytic domain [252-551(end) amino acids of accession number NP\_002750.1] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-PKR was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : IMAP  
 Substrate : SRPKtide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 87  
 IC50 at 1 mM ATP (nM) : n.a.

---

## PLK1

Product code 05-157

Full-length human PLK1 [1-603(end) amino acids of accession number NP\_005021.2] was expressed as N-terminal GST-fusion protein (95 kDa) using baculovirus expression system. GST-PLK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDC25ctide  
 ATP ( $\mu$ M) Km app / Bin : 5.6 / 5  
 Metal : Mg  
 Reference compound : GW843682X  
 IC50 at ATP Bin (nM) : 3.6  
 IC50 at 1 mM ATP (nM) : 47

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## PLK2

Product code 05-158

Full-length human PLK2 [1-685(end) amino acids of accession number NP\_006613.2] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-PLK2 was purified by using glutathione sepharose chromatography.

Assay platform : IMAP  
 Substrate : CHK2 peptide  
 ATP ( $\mu$ M) Km app / Bin : 30 / 30  
 Metal : Mg  
 Reference compound : GW843682X  
 IC50 at ATP Bin (nM) : 4.8  
 IC50 at 1 mM ATP (nM) : n.a.

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## PLK3

Product code 05-159

Human PLK3, catalytic domain [58-340 amino acids of accession number NP\_004064.2] was expressed as N-terminal GST-fusion protein (59 kDa) using baculovirus expression system. GST-PLK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CDC25ctide  
 ATP ( $\mu$ M) Km app / Bin : 6.8 / 5  
 Metal : Mg  
 Reference compound : GW843682X  
 IC50 at ATP Bin (nM) : 33  
 IC50 at 1 mM ATP (nM) : 450

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## PRKX

Product code 01-130

Full-length human PRKX [1-358(end) amino acids of accession number NP\_005035.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-PRKX was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Kemptide  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.59  
 IC50 at 1 mM ATP (nM) : n.a.

---

## **PYK2(PTK2B)**

Product code 08-138

Full-length human PYK2 [1-967(end) amino acids of accession number NP\_775267.1] was expressed as N-terminal GST-fusion protein (138 kDa) using baculovirus expression system. GST-PYK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 56 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.2  
 IC50 at 1 mM ATP (nM) : 4.9

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## **QIK(SNF1LK2)**

Product code 02-129

Full-length human QIK(SNF1LK2) [1-926(end) amino acids of accession number NP\_056006.1] was expressed as N-terminal GST-fusion protein (132 kDa) using baculovirus expression system. GST-QIK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : AMARA peptide  
 ATP ( $\mu$ M) Km app / Bin : 42 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.4  
 IC50 at 1 mM ATP (nM) : 2.9

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## **RET**

Product code 08-159

Human RET, cytoplasmic domain [658-1114(end) amino acids of accession number NP\_066124.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-RET was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 7.5 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.3  
 IC50 at 1 mM ATP (nM) : 20

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## **RET[G691S]**

Product code 08-522

Human RET, cytoplasmic domain [658-1114(end) amino acids and G691S of accession number NP\_066124.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-RET[G691S] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.1  
 IC50 at 1 mM ATP (nM) : 24

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## **RET[M918T]**

Product code 08-508

Human RET, cytoplasmic domain [658-1114(end) amino acids and M918T of accession number NP\_066124.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-RET[M918T] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 4.2 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.4  
 IC50 at 1 mM ATP (nM) : 81



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## RET[S891A]

Product code 08-523

Human RET, cytoplasmic domain [658-1114(end) amino acids and S891A of accession number NP\_066124.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-RET[S891A] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.44  
 IC50 at 1 mM ATP (nM) : 9.6

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## RET[Y791F]

Product code 08-521

Human RET, cytoplasmic domain [658-1114(end) amino acids and Y791F of accession number NP\_066124.1] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-RET[Y791F] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 29 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.5  
 IC50 at 1 mM ATP (nM) : 26

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## ROCK1

Product code 01-109

Human ROCK1, catalytic domain [1-477 amino acids of accession number NP\_005397.1] was expressed as N-terminal GST-fusion protein (82 kDa) using baculovirus expression system. GST-ROCK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : LIMKtide  
 ATP ( $\mu$ M) Km app / Bin : 3.1 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.6  
 IC50 at 1 mM ATP (nM) : 73

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## ROCK2

Product code 01-110

Human ROCK2, catalytic domain [1-553 amino acids of accession number NP\_004841.2] was expressed as N-terminal GST-fusion protein (91 kDa) using baculovirus expression system. GST-ROCK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : LIMKtide  
 ATP ( $\mu$ M) Km app / Bin : 7.4 / 5  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.92  
 IC50 at 1 mM ATP (nM) : 21

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## RON(MST1R)

Product code 08-152

Human RON, cytoplasmic domain [979-1400(end) amino acids of accession number NP\_002438.1] was expressed as N-terminal GST-fusion protein (75kDa) using baculovirus expression system. GST-RON was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 27 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 37  
 IC50 at 1 mM ATP (nM) : 550

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## ROS(ROS1)

Product code 08-163

Human ROS, cytoplasmic domain [1883-2347(end) amino acids of accession number NP\_002935.2] was expressed as N-terminal GST-fusion protein (79 kDa) using baculovirus expression system. GST-ROS was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : IRS1  
 ATP ( $\mu$ M) Km app / Bin : 37 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.4  
 IC50 at 1 mM ATP (nM) : 1.0

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## RSK1(RPS6KA1)

Product code 01-149

Full-length human RSK1 [1-735(end) amino acids of accession number NP\_002944.2] was expressed as N-terminal GST-fusion protein (110 kDa) using baculovirus expression system. GST-RSK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K peptide(N-FL)  
 ATP ( $\mu$ M) Km app / Bin : 21 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.14  
 IC50 at 1 mM ATP (nM) : 2.5

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## RSK2(RPS6KA3)

Product code 01-150

Full-length human RSK2 [1-740(end) amino acids of accession number NP\_004577.1] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-RSK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K peptide(N-FL)  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.10  
 IC50 at 1 mM ATP (nM) : n.a.

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## RSK3(RPS6KA2)

Product code 01-151

Full-length human RSK3 [1-733(end) amino acids of accession number NP\_066958.2] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-RSK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K peptide(N-FL)  
 ATP ( $\mu$ M) Km app / Bin : 9.9 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.11  
 IC50 at 1 mM ATP (nM) : 1.7

---

## RSK4(RPS6KA6)

Product code 01-152

Full-length human RSK4 [1-745(end) amino acids of accession number NP\_055311.1] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-RSK4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : S6K peptide(N-FL)  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.051  
 IC50 at 1 mM ATP (nM) : 0.56

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## SGK

Product code 01-158

Truncated human SGK [61-431(end) amino acids and S422D of accession number NP\_005618.2] was co-expressed as N-terminal GST-fusion protein (68 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-SGK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 52 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 10  
 IC50 at 1 mM ATP (nM) : 99

---

## SGK2

Product code 01-159

Full-length human SGK2 [1-367(end) amino acids and S356D of accession number NP\_733794.1] was co-expressed as N-terminal GST-fusion protein (68 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-SGK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 58 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 30  
 IC50 at 1 mM ATP (nM) : n.a.

---

## SGK3(SGKL)

Product code 01-160

Truncated human SGK3 [119-496(end) amino acids and S486D of accession number NP\_037389.4] was co-expressed as N-terminal GST-fusion protein (68 kDa) with His-tagged PDK1 [1-556(end) amino acids of accession number NP\_002604.1] using baculovirus expression system. GST-SGK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SGKtide  
 ATP ( $\mu$ M) Km app / Bin : 17 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 42  
 IC50 at 1 mM ATP (nM) : n.a.

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## SIK(SNF1LK)

Product code 02-131

Full-length human SIK [1-783(end) amino acids of accession number NP\_775490.2] was expressed as N-terminal GST-fusion protein (112 kDa) using baculovirus expression system. GST-SIK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : AMARA peptide  
 ATP ( $\mu$ M) Km app / Bin : 47 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.8  
 IC50 at 1 mM ATP (nM) : 1.0

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## skMLCK(MYLK2)

Product code 02-150

Full-length human skMLCK [1-596(end) amino acids of accession number NP\_149109.1] was expressed as N-terminal GST-fusion protein (93 kDa) using baculovirus expression system. GST-skMLCK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MLCtide  
 ATP ( $\mu$ M) Km app / Bin : 820 / 1000  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 51  
 IC50 at 1 mM ATP (nM) : 51

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## SLK

Product code 07-129

Full-length human SLK [1-1152(end) amino acids and S5N of accession number NP\_055535.1] was expressed as N-terminal GST-fusion protein (160 kDa) using baculovirus expression system. GST-SLK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 36 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.32  
 IC50 at 1 mM ATP (nM) : n.a.

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## SPHK1

Product code 11-105

Full-length human SPHK1 [1-384(end) amino acids of accession number NP\_001136074.1] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-SPHK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Sphingosine  
 ATP ( $\mu$ M) Km app / Bin : 20 / 25  
 Metal : Mg  
 Reference compound : PF-543  
 IC50 at ATP Bin (nM) : 3.9  
 IC50 at 1 mM ATP (nM) : n.a.

---

## SPHK2

Product code 11-106

Full-length human SPHK2 [1-618(end) amino acids of accession number NP\_001191089.1] was expressed as N-terminal GST-fusion protein (92 kDa) using baculovirus expression system. GST-SPHK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Sphingosine  
 ATP ( $\mu$ M) Km app / Bin : 620 / 600  
 Metal : Mg  
 Reference compound : PF-543  
 IC50 at ATP Bin (nM) : 400  
 IC50 at 1 mM ATP (nM) : n.a.

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## SRC

Product code 08-173

Full-length human SRC [1-536(end) amino acids of accession number NP\_005408.1] was expressed as N-terminal GST-fusion protein (87 kDa) using baculovirus expression system. GST-SRC was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 31 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 5.3  
 IC50 at 1 mM ATP (nM) : 33

---

## SRM(SRMS)

Product code 08-174

Human SRM, catalytic domain [215-488(end) amino acids of accession number NP\_543013.1] was expressed as N-terminal GST-fusion protein (58kDa) using baculovirus expression system. GST-SRM was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 38 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 290  
 IC50 at 1 mM ATP (nM) : 5000

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## SRPK1

Product code 04-160

Full-length human SRPK1 [1-655(end) amino acids and V564 deletion of accession number NP\_003128.3] was expressed as N-terminal GST-fusion protein (101 kDa) using E. coli expression system. GST-SRPK1 was purified by using glutathione sepharose chromatography.

Assay platform : IMAP  
 Substrate : SRPKtide  
 ATP ( $\mu$ M) Km app / Bin : 200 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 85  
 IC50 at 1 mM ATP (nM) : n.a.

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## SRPK2

Product code 04-161

Full-length human SRPK2 [1-688(end) amino acids of accession number NP\_872633.1] was expressed as N-terminal GST-fusion protein (104 kDa) using baculovirus expression system. GST-SRPK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : DYRKtide-F  
 ATP ( $\mu$ M) Km app / Bin : 14 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 600  
 IC50 at 1 mM ATP (nM) : n.a.

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## SYK

Product code 08-176

Full-length human SYK [1-635(end) amino acids of accession number NP\_003168.2] was expressed as N-terminal GST-fusion protein (99 kDa) using baculovirus expression system. GST-SYK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 59 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.29  
 IC50 at 1 mM ATP (nM) : 0.63

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## TAK1-TAB1(MAP3K7)

Product code 09-019

Fused gene of human TAK1 [1-303 amino acids of accession number NP\_663304.1] and human TAB1 [437-504 amino acids of accession number NP\_006107.1] was expressed as N-terminal His-tagged protein (45kDa) using baculovirus expression system. His-tagged TAK1-TAB1 was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : LRRKtide  
 ATP ( $\mu$ M) Km app / Bin : 37 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 12  
 IC50 at 1 mM ATP (nM) : 27

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## TAOK2

Product code 07-133

Human TAOK2, catalytic domain [1-319 amino acid of accession number NP\_004774.1] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-TAOK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : TAOKtide  
 ATP ( $\mu$ M) Km app / Bin : 39 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 24  
 IC50 at 1 mM ATP (nM) : 100

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## TBK1

Product code 05-115

Full-length human TBK1 [1-729(end) amino acids of accession number NP\_037386.1] was expressed as N-terminal GST-fusion protein (111 kDa) using baculovirus expression system. GST-TBK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CKtide  
 ATP ( $\mu$ M) Km app / Bin : 21 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.2  
 IC50 at 1 mM ATP (nM) : n.a.

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## TEC

Product code 08-182

Human TEC, catalytic domain [359-631 amino acids of accession number AAI01712.1] was expressed as N-terminal GST-fusion protein (59 kDa) using baculovirus expression system. GST-TEC was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 55 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 20  
 IC50 at 1 mM ATP (nM) : 220

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## TIE2(TEK)

Product code 08-185

Human TIE2, cytoplasmic domain [771-1124(end) amino acids of accession number NP\_000450.1] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-TIE2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 94 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 100  
 IC50 at 1 mM ATP (nM) : 190

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## TNIK

Product code 07-138

Human TNIK, catalytic domain [1-314 amino acids of accession number NP\_055843.1] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-TNIK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Moesin-derived peptide  
 ATP ( $\mu$ M) Km app / Bin : 16 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 11

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## TNK1

Product code 08-104

Human TNK1, catalytic domain [106-390 amino acids of accession number Q13470-2] was expressed as N-terminal GST-fusion protein (58 kDa) using baculovirus expression system. GST-TNK1 was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 71 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.55  
 IC50 at 1 mM ATP (nM) : 1.7

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## TRKA(NTRK1)

Product code 08-186

Human TRKA, cytoplasmic domain [436-790(end) amino acids of accession number NP\_001012331.1] was expressed as N-terminal GST-fusion protein (67 kDa) using baculovirus expression system. GST-TRKA was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 65 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.34  
 IC50 at 1 mM ATP (nM) : 0.64

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## TRKB(NTRK2)

Product code 08-187

Human TRKB, cytoplasmic domain [456-822(end) amino acids of accession number NP\_001018074.1] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-TRKB was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 80 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.29  
 IC50 at 1 mM ATP (nM) : 0.55

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## TRKC(NTRK3)

Product code 08-197

Human TRKC, cytoplasmic domain [456-825(end) amino acids of accession number NP\_002521.2] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-TRKC was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 47 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.32  
 IC50 at 1 mM ATP (nM) : 1.0

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## TSSK1

Product code 02-364

Full-length human TSSK1 [1-367(end) amino acids of accession number NP\_114417.1] was expressed as N-terminal GST-fusion protein using baculovirus expression system. GST-TSSK1 was purified by using glutathione sepharose chromatography. GST-TSSK1 was cleaved by PreScission protease and GST-free TSSK1 (42 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 11 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.19  
 IC50 at 1 mM ATP (nM) : 0.95

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## TSSK2

Product code 02-165

Full-length human TSSK2 [1-358(end) amino acids of accession number NP\_443732.3] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-TSSK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 8.8 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 4.7  
 IC50 at 1 mM ATP (nM) : n.a.

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## TSSK3

Product code 02-166

Full-length human TSSK3 [2-268(end) amino acids of accession number NP\_443073.1] was expressed as N-terminal GST-fusion protein (57 kDa) using baculovirus expression system. GST-TSSK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : GS peptide  
 ATP ( $\mu$ M) Km app / Bin : 45 / 50  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 12  
 IC50 at 1 mM ATP (nM) : n.a.

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## TXK

Product code 08-183

Human TXK, catalytic domain [260-527(end) amino acids of accession number NP\_003319.1] was expressed as N-terminal GST-fusion protein (58 kDa) using baculovirus expression system. GST-TXK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 110 / 100  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 45  
 IC50 at 1 mM ATP (nM) : 220

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## TYK2

Product code 08-147

Human TYK2, catalytic domain [871-1187(end) amino acids of accession number NP\_003322.3] was expressed as N-terminal GST-fusion protein (63 kDa) using baculovirus expression system. GST-TYK2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 18 / 25  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.0  
 IC50 at 1 mM ATP (nM) : 7.0

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## TYRO3

Product code 08-109

Human TYRO3, cytoplasmic domain of [453-890(end) amino acids of accession number NP\_006284.2] was expressed as N-terminal GST fusion protein (76 kDa) using baculovirus expression system. GST-TYRO3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : CSKtide  
 ATP ( $\mu$ M) Km app / Bin : 80 / 75  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.3  
 IC50 at 1 mM ATP (nM) : 2.9

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## WNK1

Product code 05-179

Human WNK1, catalytic domain [1-491 amino acids of accession number NP\_061852.1] was expressed as N-terminal GST-fusion protein (81 kDa) using baculovirus expression system. GST-WNK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SPAKtide  
 ATP ( $\mu$ M) Km app / Bin : 140 / 150  
 Metal : Mg+Mn  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 4500  
 IC50 at 1 mM ATP (nM) : n.a.



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## WNK2

Product code 05-180

Human WNK2, catalytic domain [166-489 amino acids of accession number NP\_006639.3] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-WNK2 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SPAKtide  
 ATP ( $\mu$ M) Km app / Bin : 48 / 50  
 Metal : Mg+Mn  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 2300  
 IC50 at 1 mM ATP (nM) : n.a.

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## WNK3

Product code 05-181

Human WNK3, catalytic domain [1-434 amino acids of accession number NP\_065973.2] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-WNK3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : SPAKtide  
 ATP ( $\mu$ M) Km app / Bin : 48 / 50  
 Metal : Mg+Mn  
 Reference compound : K252a  
 IC50 at ATP Bin (nM) : 1300  
 IC50 at 1 mM ATP (nM) : n.a.

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## YES(YES1)

Product code 08-175

Full-length human YES [1-543(end) amino acids of accession number NP\_005424.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-YES was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 13 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 2.4  
 IC50 at 1 mM ATP (nM) : 23

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## YES(YES1)[T348I]

Product code 08-533

Full-length human YES [1-543(end) amino acids and T348I of accession number NP\_005424.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-YES[T348I] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Srctide  
 ATP ( $\mu$ M) Km app / Bin : 8.5 / 10  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 1.4  
 IC50 at 1 mM ATP (nM) : 45

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## ZAP70

Product code 08-177

Full-length human ZAP70 [1-619(end) amino acids of accession number NP\_001070] was expressed as N-terminal GST-fusion protein (97 kDa) using baculovirus expression system. GST-ZAP70 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Blk/Lyntide  
 ATP ( $\mu$ M) Km app / Bin : 3.3 / 5  
 Metal : Mg+Mn  
 Reference compound : Staurosporine  
 IC50 at ATP Bin (nM) : 0.76  
 IC50 at 1 mM ATP (nM) : 34

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## BRAF

Product code 09-122

Human BRAF, catalytic domain [433-726 amino acid of accession number NP\_004324.2] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-BRAF was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : ZM336372  
 IC50 at 1 mM ATP (nM) : >10000

*\*MAP2K1/Erk2/Modified Erktide*

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## BRAF[V600E]

Product code 09-144

Human BRAF, catalytic domain [433-726 amino acids and V600E of accession number NP\_004324.2] was expressed as N-terminal GST-fusion protein (60 kDa) using baculovirus expression system. GST-BRAF[V600E] was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : ZM336372  
 IC50 at 1 mM ATP (nM) : 662

*\*MAP2K1/Erk2/Modified Erktide*

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## COT(MAP3K8)

Product code 07-301

Human COT, catalytic domain [30-397 amino acids of accession number NP\_005195.2] was expressed as N-terminal GST-fusion protein using baculovirus expression system. GST-COT was purified by using glutathione sepharose chromatography. GST-COT was cleaved by PreScission protease and GST-free COT (42 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 120

*\*MAP2K1/Erk2/Modified Erktide*

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## DLK(MAP3K12)

Product code 09-111

Human DLK, catalytic domain [1-520 amino acid of accession number NP\_006292.3] was expressed as N-terminal GST-fusion protein (86 kDa) using baculovirus expression system. GST-DLK was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K4/MAP2K7  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 460

*\*(MAP2K4/MAP2K7)/JNK2/Modified Erktide*

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## MAP2K1

Product code 07-141

Full-length human MAP2K1 [1-393(end) amino acids of accession number NP\_002746.1] was co-expressed as N-terminal GST-fusion protein (71 kDa) with human His-tagged RAF1 [306-648(end) amino acids and Y340D and Y341D of accession number NP\_002871.1] using baculovirus expression system. GST-MAP2K1 was purified by using glutathione sepharose chromatography and Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Erk2  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 58

*\*Erk2/Modified Erktide*

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## MAP2K2

Product code [07-142](#)

Full-length human MAP2K2 [1-400(end) amino acids of accession number NP\_109587.1] was co-expressed as N-terminal GST-fusion protein (71 kDa) with human His-tagged RAF1 [306-648(end) amino acids and Y340D and Y341D of accession number NP\_002871.1] using baculovirus expression system. GST-MAP2K2 was purified by using glutathione sepharose chromatography and Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Erk2  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 54

*\*Erk2/Modified Erktide*

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## MAP2K3

Product code [07-143](#)

Full-length human MAP2K3 [1-347(end) amino acids of accession number NP\_659731.1] was co-expressed as N-terminal GST-fusion protein (67 kDa) with human His-tagged MLK3 [99-398 amino acids of accession number NP\_002410.1] using baculovirus expression system. GST-MAP2K3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : p38α  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 790

*\*p38α/Modified Erktide*

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## MAP2K4

Product code [07-144](#)

Full-length human MAP2K4 [1-399(end) amino acids of accession number NP\_003001.1] was co-expressed as N-terminal GST-fusion protein (71 kDa) with human His-tagged MAP3K3 [1-626(end) amino acids of accession number NP\_002392.2] using baculovirus expression system. GST-MAP2K4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : JNK2  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 4600

*\*JNK2/Modified Erktide*

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## MAP2K5

Product code [07-145](#)

Full-length human MAP2K5 [1-448(end) amino acids of accession number NP\_660143.1] was co-expressed as N-terminal GST-fusion protein (77 kDa) with human His-tagged MAP3K3[1-626(end) amino acids of accession number NP\_002392.2] , CDC37 and HSP90 using baculovirus expression system. GST-MAP2K5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : Erk5  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 62

*\*Erk5/EGFR-derived peptide*

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## MAP2K6

Product code [07-146](#)

Full-length human MAP2K6 [1-334(end) amino acids of accession number NP\_002749.2] was co-expressed as N-terminal GST-fusion protein (64 kDa) with human His-tagged MLK3 [99-398 amino acids of accession number NP\_002410.1] using baculovirus expression system. GST-MAP2K6 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : p38α  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 140

*\*p38α/Modified Erktide*

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## MAP2K7

Product code 07-148

Full-length human MAP2K7 [1-419(end) amino acids of accession number NP\_660186.1] was co-expressed as N-terminal GST-fusion protein (75 kDa) with human His-tagged MAP3K3 [1-626(end) amino acids of accession number NP\_002392.2] using baculovirus expression system. GST-MAP2K7 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : JNK2  
 Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 1100

*\*JNK2/Modified Erktide*

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## MAP3K1

Product code 07-103

Human MAP3K1, catalytic domain [1327-1646(end) amino acids of accession number XP\_042066.8] was expressed as N-terminal GST-fusion protein (62 kDa) using baculovirus expression system. GST-MAP3K1 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
 Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 160

*\*MAP2K1/Erk2/Modified Erktide*

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## MAP3K2

Product code 07-104

Human MAP3K2, catalytic domain [337-620(end) amino acids of accession number NP\_006600.3] was expressed as N-terminal GST-fusion protein (59 kDa) using baculovirus expression system. GST-MAP3K2 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K4/MAP2K7  
 Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 45

*\*(MAP2K4/MAP2K7)/JNK2/Modified Erktide*

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## MAP3K3

Product code 07-105

Full-length human MAP3K3 [1-626(end) amino acids of accession number NP\_002392.2] was expressed as N-terminal GST-fusion protein (98 kDa) using baculovirus expression system. GST-fusion MAP3K3 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K6  
 Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 72

*\*MAP2K6/p38 $\alpha$ /Modified Erktide*

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## MAP3K4

Product code 07-106

Human MAP3K4, catalytic domain [1312-1608(end) amino acids of accession number NP\_005913.2] was expressed as N-terminal GST-fusion protein (61 kDa) using baculovirus expression system. GST-MAP3K4 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K6  
 Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 100

*\*MAP2K6/p38 $\alpha$ /Modified Erktide*

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## MAP3K5

Product code 07-107

Human MAP3K5, catalytic domain [654-971 amino acids of accession number NP\_005914.1] was expressed as N-terminal GST-tagged protein (62 kDa) using baculovirus expression system. GST-MAP3K5 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K6  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 14

*\*MAP2K6/p38 $\alpha$ /Modified Erktide*

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## MLK1(MAP3K9)

Product code 09-115

Human MLK1, catalytic domain [110-422 amino acids of accession number NP\_149132.2] was expressed as N-terminal GST-fusion protein (62kDa) using baculovirus expression system. GST-MLK1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 11

*\*MAP2K1/Erk2/Modified Erktide*

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## MLK2(MAP3K10)

Product code 09-116

Human MLK2, catalytic domain and leucine-zipper domain [75-462 amino acids of accession number NP\_002437.2] was expressed as N-terminal GST-fusion protein (71kDa) using baculovirus expression system. GST-MLK2 was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 45

*\*MAP2K1/Erk2/Modified Erktide*

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## MLK3(MAP3K11)

Product code 09-017

Human MLK3, catalytic domain [99-398 amino acids of accession number NP\_002410.1] was expressed as N-terminal His-tagged protein (37kDa) using baculovirus expression system. His-tagged MLK3 was purified by using Ni-NTA affinity chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 4.8

*\*MAP2K1/Erk2/Modified Erktide*

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## MOS

Product code 05-118

Full-length, human MOS [1-346(end) amino acids of accession number NP\_005363.1] was expressed as N-terminal GST-fusion protein (65 kDa) using baculovirus expression system. GST-MOS was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform : Mobility Shift Assay  
 Substrate : MAP2K1  
                   Cascade Assay\*  
 Metal : Mg  
 Reference compound : Staurosporine  
 IC50 at 1 mM ATP (nM) : 32

*\*MAP2K1/Erk2/Modified Erktide*

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## RAF1

Product code 09-125

Human RAF1, catalytic domain [306-648(end) amino acids and Y340D and Y341D of accession number NP\_002871.1] was expressed as N-terminal GST-fusion protein (66 kDa) using baculovirus expression system. GST-RAF1 was purified by using glutathione sepharose chromatography.

Assay platform : Mobility Shift Assay  
Substrate : MAP2K1  
Cascade Assay\*  
Metal : Mg  
Reference compound : ZM336372  
IC50 at 1 mM ATP (nM) : 2800

*\*MAP2K1/Erk2/Modified Erktide*

## Assay conditions

### Test compounds

The test compound is dissolved in and diluted with dimethylsulfoxide (DMSO) to achieve 100-fold higher concentration which is specified by the sponsor. Then the solution is further 25-fold diluted with assay buffer to make the final test compound solution. Reference compounds for the assay control are prepared similarly.

### Assay reagents and procedures

#### IMAP™ assay

- 1) 4x Substrate/ATP/Metal solution and 2x kinase solution are prepared with assay buffer (20 mM HEPES, 0.01% Tween-20, 2 mM DTT, pH7.4).
- 2) 5 µL of 4x compound solution, 5 µL of 4x Substrate/ATP/Metal solution, and 10 µL of 2x kinase solution are mixed and incubated in a well of polystyrene 384 well black microplate for 1 hour at room temperature.
- 3) 60 µL of IMAP binding reagent (IMAP™ Screening Express kit; Molecular Devices) is added to the well, and incubated for over 30 minutes.
- 4) The kinase reaction is evaluated by the fluorescence polarization at 485 nm for excitation and 530 nm for emission of the well.

#### Off-chip Mobility Shift Assay (MSA)

- 1) 4x Substrate/ATP/Metal solution is prepared with kit buffer (20 mM HEPES, 0.01% Triton X-100, 5 mM DTT, pH7.5), and 2x kinase solution is prepared with assay buffer (20 mM HEPES, 0.01% Triton X-100, 1 mM DTT, pH7.5).
- 2) 5 µL of 4x compound solution, 5 µL of 4x Substrate/ATP/Metal solution, and 10 µL of 2x kinase solution are mixed and incubated in a well of polypropylene 384 well microplate for 1 or 5 hour(s)\* at room temperature. (\*; depend on kinase)
- 3) 70 µL of Termination Buffer (127 mM HEPES, 0.01% Triton X-100, 26.7 mM EDTA-2Na, 1% DMSO, pH7.5) is added to the well.
- 4) The reaction mixture is applied to LabChip™ system (PerkinElmer), and the product and substrate peptide peaks are separated and quantitated.
- 5) The kinase reaction is evaluated by the product ratio calculated from peak heights of product(P) and substrate(S) peptides (P/(P+S)).

#### Off-chip Mobility Shift Assay (MSA) with pre-incubation

- 1) 4x Substrate/ATP/Metal solution is prepared with kit buffer (20 mM HEPES, 0.01% Triton X-100, 5 mM DTT, pH7.5), and 2x kinase solution is prepared with assay buffer (20 mM HEPES, 0.01% Triton X-100, 1 mM DTT, pH7.5).
- 2) 5 µL of 4x compound solution and 10 µL of 2x kinase solution are mixed and incubated in a well of polypropylene 384 well microplate for 30 minutes at room temperature.
- 3) 5 µL of 4x Substrate/ATP/Metal solution is added to the well, and incubated for 1 hour at room temperature.
- 4) 70 µL of Termination Buffer (127 mM HEPES, 0.01% Triton X-100, 26.7 mM EDTA-2Na, 1% DMSO, pH7.5) is added to the well.
- 5) The reaction mixture is applied to LabChip™ system (PerkinElmer), and the product and substrate peptide peaks are separated and quantitated.
- 6) The kinase reaction is evaluated by the product ratio calculated from peak heights of product(P) and substrate(S) peptides (P/(P+S)).

### ADP-Glo™ Kinase Assay

- 1) 4x compound solution and 4x ATP solution are prepared with assay buffer (50 mM MOPS, 1 mM DTT, pH7.2). 4x Substrate solution and 4x kinase/Metal solution are prepared with MOPS based buffer containing individual kinase specific additives.
- 2) 5  $\mu$ L of 4x compound solution, 5  $\mu$ L of 4x Substrate solution, 5  $\mu$ L of 4x ATP solution, and 5  $\mu$ L of 4x kinase/Metal solution are mixed and incubated in a well of polystyrene 384 well black microplate for 1 hour at room temperature.
- 3) 20  $\mu$ L of ADP-Glo™ Reagent (Promega) is added to the well, and incubated for over 40 minutes.
- 4) 40  $\mu$ L of Kinase Detection Reagent (Promega) is added to the well, and incubated for over 40 minutes.
- 5) The kinase reaction is evaluated by the endpoint luminescence of the well.



## Reaction conditions

### ATP Km Bin

| Kinase                                 | Platform | Substrate           |      | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|--|----------|---------------------|------|----------------|-------|-------|------|------------------|
|  |          | Name                | (nM) | Km             | Assay | Name  | (mM) |                  |
| ABL                                    | MSA      | ABLTide             | 1000 | 16             | 25    | Mg    | 5    | Staurosporine    |
| ABL[E255K]                             | MSA      | ABLTide             | 1000 | 17             | 25    | Mg    | 5    | Staurosporine    |
| ABL[T315I]                             | MSA      | ABLTide             | 1000 | 4.0            | 5     | Mg    | 5    | Staurosporine    |
| ACK <sup>1)</sup>                      | MSA      | WASP peptide        | 1000 | 97             | 100   | Mg    | 5    | Staurosporine    |
| AKT1                                   | MSA      | Crosstide           | 1000 | 31             | 50    | Mg    | 5    | Staurosporine    |
| AKT2                                   | MSA      | Crosstide           | 1000 | 110            | 100   | Mg    | 5    | Staurosporine    |
| AKT3                                   | MSA      | Crosstide           | 1000 | 54             | 50    | Mg    | 5    | Staurosporine    |
| ALK                                    | MSA      | Srctide             | 1000 | 57             | 50    | Mg    | 5    | Staurosporine    |
| ALK[C1156Y]                            | MSA      | Srctide             | 1000 | 64             | 75    | Mg    | 5    | Staurosporine    |
| ALK[F1174L]                            | MSA      | Srctide             | 1000 | 49             | 50    | Mg    | 5    | Staurosporine    |
| ALK[G1202R]                            | MSA      | Srctide             | 1000 | 31             | 50    | Mg    | 5    | Staurosporine    |
| ALK[G1269A]                            | MSA      | Srctide             | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| ALK[L1196M]                            | MSA      | Srctide             | 1000 | 57             | 75    | Mg    | 5    | Staurosporine    |
| ALK[R1275Q]                            | MSA      | Srctide             | 1000 | 84             | 100   | Mg    | 5    | Staurosporine    |
| ALK[T1151_L1152insT]                   | MSA      | Srctide             | 1000 | 110            | 100   | Mg    | 5    | Staurosporine    |
| EML4-ALK <sup>1)</sup>                 | MSA      | Srctide             | 1000 | 43             | 50    | Mg    | 5    | Staurosporine    |
| NPM1-ALK                               | MSA      | Srctide             | 1000 | 57             | 50    | Mg    | 5    | Staurosporine    |
| AMPK $\alpha$ 1/ $\beta$ 1/ $\gamma$ 1 | MSA      | SAMS peptide        | 1000 | 130            | 150   | Mg    | 5    | Staurosporine    |
| AMPK $\alpha$ 2/ $\beta$ 1/ $\gamma$ 1 | MSA      | SAMS peptide        | 1000 | 100            | 100   | Mg    | 5    | Staurosporine    |
| ARG                                    | MSA      | ABLTide             | 1000 | 24             | 25    | Mg    | 5    | Staurosporine    |
| AurA                                   | MSA      | Kemptide            | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| AurA/TPX2 <sup>9)</sup>                | MSA      | Kemptide            | 1000 | 1.7            | 2     | Mg    | 5    | Staurosporine    |
| AurB/INCENP                            | MSA      | Kemptide            | 1000 | 16             | 25    | Mg    | 5    | Staurosporine    |
| AurC                                   | MSA      | Kemptide            | 1000 | 24             | 25    | Mg    | 5    | Staurosporine    |
| AXL                                    | MSA      | CSKTide             | 1000 | 32             | 50    | Mg    | 5    | Staurosporine    |
| BLK                                    | MSA      | Srctide             | 1000 | 62             | 75    | Mg    | 5    | Staurosporine    |
| BMX                                    | MSA      | Srctide             | 1000 | 75             | 75    | Mg    | 5    | Staurosporine    |
| BRK <sup>1)</sup>                      | MSA      | Blk/Lyntide         | 1000 | 250            | 250   | Mg    | 5    | Staurosporine    |
| BRSK1                                  | MSA      | CHKTide             | 1000 | 30             | 25    | Mg    | 5    | Staurosporine    |
| BRSK2                                  | MSA      | CHKTide             | 1000 | 31             | 50    | Mg    | 5    | Staurosporine    |
| BTK                                    | MSA      | Srctide             | 1000 | 22             | 25    | Mg    | 5    | Staurosporine    |
| BTK[C481S]                             | MSA      | Srctide             | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| BUB1/BUB3                              | MSA      | H2A peptide         | 1000 | 2.9            | 5     | Mg    | 5    | Staurosporine    |
| CaMK1 $\alpha$ <sup>1)3)</sup>         | MSA      | GS peptide          | 1000 | 750            | 1000  | Mg    | 5    | Staurosporine    |
| CaMK1 $\delta$ <sup>1)3)</sup>         | MSA      | Synapsin peptide    | 1000 | 11             | 10    | Mg    | 5    | Staurosporine    |
| CaMK2 $\alpha$ <sup>3)</sup>           | MSA      | GS peptide          | 1000 | 33             | 50    | Mg    | 5    | Staurosporine    |
| CaMK2 $\beta$ <sup>3)</sup>            | MSA      | GS peptide          | 1000 | 19             | 25    | Mg    | 5    | Staurosporine    |
| CaMK2 $\gamma$ <sup>3)</sup>           | MSA      | GS peptide          | 1000 | 23             | 25    | Mg    | 5    | Staurosporine    |
| CaMK2 $\delta$ <sup>3)</sup>           | MSA      | GS peptide          | 1000 | 6.3            | 5     | Mg    | 5    | Staurosporine    |
| CaMK4 <sup>3)</sup>                    | MSA      | GS peptide          | 1000 | 20             | 25    | Mg    | 5    | Staurosporine    |
| CDC2/CycB1                             | MSA      | Modified Histone H1 | 1000 | 34             | 50    | Mg    | 5    | Staurosporine    |
| CDC7/ASK <sup>1)</sup>                 | MSA      | MCM2 peptide        | 1000 | 2.8            | 5     | Mg    | 10   | Staurosporine    |
| CDK2/CycA2                             | MSA      | Modified Histone H1 | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| CDK2/CycE1                             | MSA      | Modified Histone H1 | 1000 | 130            | 150   | Mg    | 5    | Staurosporine    |

| Kinase                       | Platform | Substrate           |      | ATP ( $\mu$ M) |       | Metal  |      | Positive control |
|------------------------------|----------|---------------------|------|----------------|-------|--------|------|------------------|
|                              |          | Name                | (nM) | Km             | Assay | Name   | (mM) |                  |
| CDK3/CycE1                   | MSA      | Modified Histone H1 | 1000 | 1000           | 1000  | Mg     | 5    | Staurosporine    |
| CDK4/CycD3 <sup>1)</sup>     | MSA      | DYRKtide-F          | 1000 | 200            | 200   | Mg     | 5    | Staurosporine    |
| CDK5/p25                     | MSA      | Modified Histone H1 | 1000 | 10             | 10    | Mg     | 5    | Staurosporine    |
| CDK6/CycD3 <sup>1)</sup>     | MSA      | DYRKtide-F          | 1000 | 330            | 300   | Mg     | 5    | Staurosporine    |
| CDK7/CycH/MAT1 <sup>1)</sup> | MSA      | CTD3 peptide        | 1000 | 32             | 50    | Mg     | 5    | Staurosporine    |
| CDK9/CycT1 <sup>1)</sup>     | MSA      | CDK9 substrate      | 1000 | 9.4            | 10    | Mg     | 5    | Staurosporine    |
| CGK2 <sup>4)</sup>           | MSA      | Kemptide            | 1000 | 24             | 25    | Mg     | 5    | Staurosporine    |
| CHK1                         | MSA      | CHKtide             | 1000 | 50             | 50    | Mg     | 5    | Staurosporine    |
| CHK2                         | MSA      | CHKtide             | 1000 | 51             | 50    | Mg     | 5    | Staurosporine    |
| CK1 $\alpha$ <sup>1)</sup>   | MSA      | CKtide              | 1000 | 4.1            | 5     | Mg     | 5    | 5-Iodotubercidin |
| CK1 $\gamma$ 1               | MSA      | CKtide              | 1000 | 6.3            | 5     | Mg     | 5    | 5-Iodotubercidin |
| CK1 $\gamma$ 2               | MSA      | CKtide              | 1000 | 10             | 10    | Mg     | 5    | 5-Iodotubercidin |
| CK1 $\gamma$ 3               | MSA      | CKtide              | 1000 | 3.2            | 5     | Mg     | 5    | 5-Iodotubercidin |
| CK1 $\delta$                 | MSA      | CKtide              | 1000 | 7.7            | 10    | Mg     | 5    | 5-Iodotubercidin |
| CK1 $\epsilon$ <sup>1)</sup> | MSA      | CKtide              | 1000 | 16             | 25    | Mg     | 5    | 5-Iodotubercidin |
| CK2 $\alpha$ 1/ $\beta$      | MSA      | CK2tide             | 1000 | 2.9            | 5     | Mg     | 5    | TBB              |
| CK2 $\alpha$ 2/ $\beta$      | MSA      | CK2tide             | 1000 | 2.1            | 5     | Mg     | 5    | TBB              |
| CLK1                         | MSA      | DYRKtide-F          | 1000 | 11             | 10    | Mg     | 5    | Staurosporine    |
| CLK2                         | MSA      | DYRKtide-F          | 1000 | 140            | 150   | Mg     | 5    | Staurosporine    |
| CLK3                         | MSA      | DYRKtide-F          | 1000 | 75             | 75    | Mg     | 5    | Staurosporine    |
| CRK1 <sup>1)</sup>           | MSA      | Histone H3 peptide  | 1000 | 7.8            | 10    | Mg     | 5    | Staurosporine    |
| CSK <sup>1)</sup>            | MSA      | Srctide             | 1000 | 4.8            | 5     | Mg, Mn | 5, 1 | Staurosporine    |
| DAPK1                        | MSA      | DAPK1tide           | 1000 | 1.1            | 1     | Mg     | 5    | Staurosporine    |
| DCAMKL2 <sup>1)</sup>        | MSA      | GS peptide          | 1000 | 120            | 150   | Mg     | 5    | Staurosporine    |
| DDR1 <sup>1)</sup>           | MSA      | IRS1                | 1000 | 94             | 100   | Mg     | 5    | Staurosporine    |
| DDR2 <sup>1)</sup>           | MSA      | IRS1                | 1000 | 38             | 50    | Mg     | 5    | Staurosporine    |
| DYRK1A                       | MSA      | DYRKtide-F          | 1000 | 16             | 25    | Mg     | 5    | Staurosporine    |
| DYRK1B                       | MSA      | DYRKtide-F          | 1000 | 59             | 50    | Mg     | 5    | Staurosporine    |
| DYRK2                        | MSA      | DYRKtide-F          | 1000 | 7.7            | 10    | Mg     | 5    | Staurosporine    |
| DYRK3                        | MSA      | DYRKtide-F          | 1000 | 6.8            | 5     | Mg     | 5    | Staurosporine    |
| EEF2K <sup>1)3)</sup>        | MSA      | EEF2Ktide           | 1000 | 12             | 10    | Mg     | 5    | A-484954         |
| EGFR                         | MSA      | Srctide             | 1000 | 2.7            | 5     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[C797S/L858R]            | MSA      | Srctide             | 1000 | 4.1            | 5     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750]               | MSA      | Srctide             | 1000 | 19             | 25    | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/C797S]         | MSA      | Srctide             | 1000 | 8.2            | 10    | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/T790M]         | MSA      | Srctide             | 1000 | 5.4            | 5     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/T790M/C797S]   | MSA      | Srctide             | 1000 | 1.8            | 2     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[D770_N771insNPG]        | MSA      | Srctide             | 1000 | 2.3            | 5     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[L858R]                  | MSA      | Srctide             | 1000 | 9.8            | 10    | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[L861Q]                  | MSA      | Srctide             | 1000 | 7.5            | 10    | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[T790M]                  | MSA      | Srctide             | 1000 | 0.90           | 1     | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[T790M/L858R]            | MSA      | Srctide             | 1000 | 1.9            | 2     | Mg, Mn | 5, 1 | Staurosporine    |
| EPHA1                        | MSA      | Blk/Lyntide         | 1000 | 22             | 25    | Mg     | 5    | Staurosporine    |
| EPHA2                        | MSA      | Blk/Lyntide         | 1000 | 67             | 75    | Mg     | 5    | Staurosporine    |
| EPHA3                        | MSA      | Blk/Lyntide         | 1000 | 170            | 150   | Mg     | 5    | Staurosporine    |
| EPHA4                        | MSA      | Blk/Lyntide         | 1000 | 52             | 50    | Mg     | 5    | Staurosporine    |
| EPHA5                        | MSA      | Blk/Lyntide         | 1000 | 56             | 50    | Mg     | 5    | Staurosporine    |
| EPHA6                        | MSA      | Blk/Lyntide         | 1000 | 27             | 25    | Mg     | 5    | Staurosporine    |

| Kinase             | Platform | Substrate                                       |      | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|--------------------|----------|---|------|----------------|-------|-------|------|------------------|
|                    |          | Name  | (nM) | Km             | Assay | Name  | (mM) |                  |
| EPHA7              | MSA      | Blk/Lyntide                                     | 1000 | 58             | 50    | Mg    | 5    | Staurosporine    |
| EPHA8              | MSA      | Blk/Lyntide                                     | 1000 | 69             | 75    | Mg    | 5    | Staurosporine    |
| EPHB1              | MSA      | Blk/Lyntide                                     | 1000 | 29             | 25    | Mg    | 5    | Staurosporine    |
| EPHB2              | MSA      | Blk/Lyntide                                     | 1000 | 86             | 100   | Mg    | 5    | Staurosporine    |
| EPHB3              | MSA      | Blk/Lyntide                                     | 1000 | 49             | 50    | Mg    | 5    | Staurosporine    |
| EPHB4              | MSA      | Blk/Lyntide                                     | 1000 | 56             | 50    | Mg    | 5    | Staurosporine    |
| Erk1               | MSA      | Modified Erktide                                | 1000 | 34             | 50    | Mg    | 5    | K252a            |
| Erk2               | MSA      | Modified Erktide                                | 1000 | 33             | 50    | Mg    | 5    | K252a            |
| Erk5 <sup>1)</sup> | MSA      | EGFR-derived peptide                            | 1000 | 450            | 1000  | Mg    | 5    | Staurosporine    |
| FAK <sup>1)</sup>  | MSA      | Blk/Lyntide                                     | 1000 | 25             | 25    | Mg    | 5    | Staurosporine    |
| FER                | MSA      | Srctide   | 1000 | 26             | 25    | Mg    | 5    | Staurosporine    |
| FES                | MSA      | Srctide   | 1000 | 43             | 50    | Mg    | 5    | Staurosporine    |
| FGFR1              | MSA      | CSKtide   | 1000 | 89             | 100   | Mg    | 5    | Staurosporine    |
| FGFR1[V561M]       | MSA      | CSKtide   | 1000 | 33             | 50    | Mg    | 5    | Staurosporine    |
| FGFR2              | MSA      | CSKtide   | 1000 | 66             | 75    | Mg    | 5    | Staurosporine    |
| FGFR2[V564I]       | MSA      | CSKtide   | 1000 | 21             | 25    | Mg    | 5    | Staurosporine    |
| FGFR3              | MSA      | CSKtide   | 1000 | 43             | 50    | Mg    | 5    | Staurosporine    |
| FGFR3[K650E]       | MSA      | CSKtide   | 1000 | 41             | 50    | Mg    | 5    | Staurosporine    |
| FGFR3[K650M]       | MSA      | CSKtide   | 1000 | 17             | 25    | Mg    | 5    | Staurosporine    |
| FGFR3[V555L]       | MSA      | CSKtide   | 1000 | 29             | 25    | Mg    | 5    | Staurosporine    |
| FGFR3[V555M]       | MSA      | CSKtide   | 1000 | 37             | 50    | Mg    | 5    | Staurosporine    |
| FGFR4              | MSA      | CSKtide   | 1000 | 230            | 250   | Mg    | 5    | Staurosporine    |
| FGFR4[N535K]       | MSA      | CSKtide   | 1000 | 30             | 25    | Mg    | 5    | Staurosporine    |
| FGFR4[V550E]       | MSA      | CSKtide   | 1000 | 210            | 200   | Mg    | 5    | Staurosporine    |
| FGFR4[V550L]       | MSA      | CSKtide   | 1000 | 160            | 150   | Mg    | 5    | Staurosporine    |
| FGR                | MSA      | Srctide   | 1000 | 34             | 50    | Mg    | 5    | Staurosporine    |
| FLT1               | MSA      | CSKtide   | 1000 | 140            | 150   | Mg    | 5    | Staurosporine    |
| FLT3               | MSA      | Srctide   | 1000 | 94             | 100   | Mg    | 5    | Staurosporine    |
| FLT4               | MSA      | CSKtide   | 1000 | 72             | 75    | Mg    | 5    | Staurosporine    |
| FMS                | MSA      | Srctide   | 1000 | 26             | 25    | Mg    | 5    | Staurosporine    |
| FRK                | MSA      | Srctide   | 1000 | 62             | 75    | Mg    | 5    | Staurosporine    |
| FYN[isoform a]     | MSA      | Srctide   | 1000 | 36             | 50    | Mg    | 5    | Staurosporine    |
| FYN[isoform b]     | MSA      | Srctide   | 1000 | 20             | 25    | Mg    | 5    | Staurosporine    |
| GSK3 $\alpha$      | MSA      | CREBtide-p                                      | 1000 | 12             | 10    | Mg    | 5    | Staurosporine    |
| GSK3 $\beta$       | MSA      | CREBtide-p                                      | 1000 | 9.1            | 10    | Mg    | 5    | Staurosporine    |
| Haspin             | MSA      | Histone H3 peptide                              | 1000 | 140            | 150   | Mg    | 5    | Staurosporine    |
| HCK                | MSA      | Srctide   | 1000 | 11             | 10    | Mg    | 5    | Staurosporine    |
| HER2               | MSA      | Srctide   | 1000 | 3.5            | 5     | Mn    | 5    | Staurosporine    |
| HER4               | MSA      | Srctide   | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| HGK                | MSA      | Moesin-derived peptide                          | 1000 | 9.4            | 10    | Mg    | 5    | Staurosporine    |
| HIPK1              | MSA      | DYRKtide-F                                      | 1000 | 4.4            | 5     | Mg    | 5    | Staurosporine    |
| HIPK2              | MSA      | DYRKtide-F                                      | 1000 | 5.9            | 5     | Mg    | 5    | Staurosporine    |
| HIPK3              | MSA      | DYRKtide-F                                      | 1000 | 7.3            | 5     | Mg    | 5    | Staurosporine    |
| HIPK4              | MSA      | DYRKtide-F                                      | 1000 | 7.0            | 5     | Mg    | 5    | Staurosporine    |
| HPK1               | MSA      | S6K2 peptide                                    | 1000 | 22             | 25    | Mg    | 1.25 | K252a            |
| IGF1R              | MSA      | IRS1  | 1000 | 63             | 75    | Mg    | 5    | Staurosporine    |
| IKK $\alpha$       | IMAP     | I $\kappa$ B $\alpha$ peptide                   | 100  | 41             | 40    | Mg    | 10   | Staurosporine    |
| IKK $\beta$        | MSA      | Modified I $\kappa$ B $\alpha$ -derived peptide | 1000 | 16             | 25    | Mg    | 5    | Staurosporine    |

| Kinase                       | Platform | Substrate                     |      | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|------------------------------|----------|-------------------------------|------|----------------|-------|-------|------|------------------|
|                              |          | Name                          | (nM) | Km             | Assay | Name  | (mM) |                  |
| IKK $\epsilon$ <sup>1)</sup> | MSA      | I $\kappa$ B $\alpha$ peptide | 1000 | 9.5            | 10    | Mg    | 5    | Staurosporine    |
| INSR                         | MSA      | IRS1                          | 1000 | 58             | 50    | Mg    | 5    | Staurosporine    |
| IRAK1                        | IMAP     | SRPKtide                      | 100  | 27             | 25    | Mg    | 2.5  | Staurosporine    |
| IRAK4 <sup>1)</sup>          | MSA      | IRAK1 peptide                 | 1000 | 920            | 1000  | Mg    | 5    | Staurosporine    |
| IRR                          | MSA      | IRS1                          | 1000 | 64             | 75    | Mg    | 5    | Staurosporine    |
| ITK                          | MSA      | Srctide                       | 1000 | 6.1            | 10    | Mg    | 5    | Staurosporine    |
| JAK1 <sup>1)6)</sup>         | MSA      | JAK1 substrate peptide        | 1000 | 68             | 75    | Mg    | 5    | Staurosporine    |
| JAK2                         | MSA      | Srctide                       | 1000 | 13             | 10    | Mg    | 5    | Staurosporine    |
| JAK3                         | MSA      | Srctide                       | 1000 | 3.5            | 5     | Mg    | 5    | Staurosporine    |
| JNK1                         | MSA      | Modified Erktide              | 1000 | 29             | 100   | Mg    | 5    | K252a            |
| JNK2                         | MSA      | Modified Erktide              | 1000 | 21             | 50    | Mg    | 5    | K252a            |
| JNK3                         | MSA      | Modified Erktide              | 1000 | 6.0            | 25    | Mg    | 5    | K252a            |
| KDR                          | MSA      | CSKtide                       | 1000 | 74             | 75    | Mg    | 5    | Staurosporine    |
| KIT <sup>6)</sup>            | MSA      | Srctide                       | 1000 | 370            | 400   | Mg    | 5    | Staurosporine    |
| KIT[D816E] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 40             | 50    | Mg    | 5    | Staurosporine    |
| KIT[D816V] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 14             | 10    | Mg    | 5    | Staurosporine    |
| KIT[D816Y] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 22             | 25    | Mg    | 5    | Staurosporine    |
| KIT[T670I] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 100            | 100   | Mg    | 5    | Staurosporine    |
| KIT[V560G] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 110            | 250   | Mg    | 5    | Staurosporine    |
| KIT[V654A] <sup>6)</sup>     | MSA      | Srctide                       | 1000 | 220            | 250   | Mg    | 5    | Staurosporine    |
| LATS2 <sup>1)</sup>          | MSA      | SGKtide                       | 1000 | 380            | 400   | Mg    | 5    | Staurosporine    |
| LCK                          | MSA      | Srctide                       | 1000 | 14             | 10    | Mg    | 5    | Staurosporine    |
| LOK <sup>1)</sup>            | MSA      | Moesin-derived peptide        | 1000 | 100            | 100   | Mg    | 5    | Staurosporine    |
| LTK                          | MSA      | Srctide                       | 1000 | 49             | 50    | Mg    | 5    | Staurosporine    |
| LYNa                         | MSA      | Srctide                       | 1000 | 14             | 10    | Mg    | 5    | Staurosporine    |
| LYNb                         | MSA      | Srctide                       | 1000 | 18             | 25    | Mg    | 5    | Staurosporine    |
| MAP4K2                       | MSA      | S6K2 peptide                  | 1000 | 93             | 100   | Mg    | 5    | Staurosporine    |
| MAPKAPK2                     | MSA      | GS peptide                    | 1000 | 3.6            | 5     | Mg    | 5    | Staurosporine    |
| MAPKAPK3                     | MSA      | GS peptide                    | 1000 | 13             | 10    | Mg    | 5    | K252a            |
| MAPKAPK5                     | MSA      | GS peptide                    | 1000 | 12             | 10    | Mg    | 5    | Staurosporine    |
| MARK1                        | MSA      | CHKtide                       | 1000 | 8.0            | 10    | Mg    | 5    | Staurosporine    |
| MARK2                        | MSA      | CHKtide                       | 1000 | 8.8            | 10    | Mg    | 5    | Staurosporine    |
| MARK3                        | MSA      | CHKtide                       | 1000 | 5.0            | 5     | Mg    | 5    | Staurosporine    |
| MARK4                        | MSA      | CHKtide                       | 1000 | 12             | 10    | Mg    | 5    | Staurosporine    |
| MELK <sup>1)</sup>           | MSA      | GS peptide                    | 1000 | 38             | 50    | Mg    | 5    | Staurosporine    |
| MER                          | MSA      | CSKtide                       | 1000 | 36             | 50    | Mg    | 5    | Staurosporine    |
| MET                          | MSA      | Srctide                       | 1000 | 27             | 25    | Mg    | 5    | Staurosporine    |
| MET[D1228H]                  | MSA      | Srctide                       | 1000 | 25             | 25    | Mg    | 5    | Staurosporine    |
| MET[M1250T]                  | MSA      | Srctide                       | 1000 | 17             | 25    | Mg    | 5    | Staurosporine    |
| MET[Y1235D]                  | MSA      | Srctide                       | 1000 | 71             | 75    | Mg    | 5    | Staurosporine    |
| MINK <sup>1)</sup>           | MSA      | Modified Erktide              | 1000 | 16             | 50    | Mg    | 5    | K252a            |
| MNK1                         | MSA      | RS peptide                    | 1000 | 460            | 450   | Mg    | 5    | Staurosporine    |
| MNK2                         | MSA      | RS peptide                    | 1000 | 110            | 100   | Mg    | 5    | Staurosporine    |
| MRCK $\alpha$ <sup>1)</sup>  | MSA      | DAPK1tide                     | 1000 | 0.45           | 1     | Mg    | 5    | Staurosporine    |
| MRCK $\beta$                 | MSA      | DAPK1tide                     | 1000 | 0.67           | 1     | Mg    | 5    | Staurosporine    |
| MSK1                         | MSA      | Crosstide                     | 1000 | 13             | 10    | Mg    | 5    | Staurosporine    |
| MSK2 <sup>1)</sup>           | MSA      | Crosstide                     | 1000 | 40             | 50    | Mg    | 5    | Staurosporine    |
| MSSK1 <sup>1)</sup>          | MSA      | DYRKtide-F                    | 1000 | 56             | 50    | Mg    | 5    | K252a            |

| Kinase                               | Platform | Substrate              |              | ATP ( $\mu$ M) |       | Metal  |       | Positive control |
|--------------------------------------|----------|------------------------|--------------|----------------|-------|--------|-------|------------------|
|                                      |          | Name                   | (nM)         | Km             | Assay | Name   | (mM)  |                  |
| MST1 <sup>1)2)</sup>                 | MSA      | IRS1                   | 1000         | 50             | 50    | Mg     | 5     | Staurosporine    |
| MST2 <sup>1)7)</sup>                 | MSA      | IRS1                   | 1000         | 69             | 75    | Mg     | 5     | Staurosporine    |
| MST3 <sup>1)</sup>                   | MSA      | Moesin-derived peptide | 1000         | 66             | 75    | Mg     | 5     | Staurosporine    |
| MST4 <sup>1)</sup>                   | MSA      | Moesin-derived peptide | 1000         | 76             | 75    | Mg     | 5     | Staurosporine    |
| MUSK <sup>1)</sup>                   | MSA      | CSKtide                | 1000         | 14             | 10    | Mg, Mn | 5, 1  | Staurosporine    |
| NDR1 <sup>1)</sup>                   | MSA      | SGKtide                | 1000         | 12             | 10    | Mg     | 5     | Staurosporine    |
| NDR2 <sup>1)</sup>                   | MSA      | SGKtide                | 1000         | 7.6            | 10    | Mg     | 5     | Staurosporine    |
| NEK1 <sup>1)</sup>                   | MSA      | CDK7 peptide           | 1000         | 64             | 75    | Mg     | 5     | Staurosporine    |
| NEK2                                 | MSA      | CDK7 peptide           | 1000         | 65             | 75    | Mg     | 5     | Staurosporine    |
| NEK4                                 | MSA      | GS peptide             | 1000         | 51             | 50    | Mg     | 5     | Staurosporine    |
| NEK6 <sup>1)</sup>                   | MSA      | CDK7 peptide           | 1000         | 69             | 75    | Mg     | 5     | PKR Inhibitor    |
| NEK7 <sup>1)</sup>                   | MSA      | CDK7 peptide           | 1000         | 40             | 50    | Mg     | 5     | PKR Inhibitor    |
| NEK9 <sup>1)</sup>                   | MSA      | CDK7 peptide           | 1000         | 190            | 200   | Mg     | 5     | Staurosporine    |
| NIM1K                                | MSA      | CHKtide                | 1000         | 21             | 25    | Mg     | 5     | Staurosporine    |
| NuaK1                                | MSA      | CHKtide                | 1000         | 59             | 50    | Mg     | 5     | Staurosporine    |
| NuaK2                                | MSA      | CHKtide                | 1000         | 26             | 25    | Mg     | 5     | Staurosporine    |
| p38 $\alpha$                         | MSA      | Modified Erktide       | 1000         | 150            | 150   | Mg     | 5     | SB202190         |
| p38 $\beta$                          | MSA      | Modified Erktide       | 1000         | 63             | 75    | Mg     | 5     | SB202190         |
| p38 $\gamma$                         | MSA      | Modified Erktide       | 1000         | 13             | 10    | Mg     | 5     | Staurosporine    |
| p38 $\delta$                         | MSA      | Modified Erktide       | 1000         | 5.8            | 5     | Mg     | 5     | Staurosporine    |
| p70S6K                               | MSA      | S6K2 peptide           | 1000         | 14             | 10    | Mg     | 5     | Staurosporine    |
| p70S6K $\beta$                       | MSA      | S6K2 peptide           | 1000         | 3.3            | 5     | Mg     | 5     | Staurosporine    |
| PAK1                                 | MSA      | LIMKtide               | 1000         | 300            | 300   | Mg     | 5     | Staurosporine    |
| PAK2                                 | MSA      | DAPK1tide              | 1000         | 81             | 100   | Mg     | 5     | Staurosporine    |
| PAK4 <sup>1)</sup>                   | MSA      | SGKtide                | 1000         | 2.5            | 5     | Mg     | 5     | Staurosporine    |
| PAK5                                 | MSA      | DAPK1tide              | 1000         | 1.9            | 1     | Mg     | 5     | Staurosporine    |
| PAK6 <sup>1)</sup>                   | MSA      | SGKtide                | 1000         | 3.7            | 5     | Mg     | 5     | Staurosporine    |
| PASK <sup>1)</sup>                   | MSA      | GS peptide             | 1000         | 9.7            | 10    | Mg     | 5     | Staurosporine    |
| PBK <sup>1)</sup>                    | MSA      | Histone H3 peptide     | 1000         | 33             | 50    | Mg     | 5     | Staurosporine    |
| PDGFR $\alpha$                       | MSA      | CSKtide                | 1000         | 28             | 25    | Mg     | 5     | Staurosporine    |
| PDGFR $\alpha$ [D842V]               | MSA      | CSKtide                | 1000         | 21             | 25    | Mg     | 5     | Staurosporine    |
| PDGFR $\alpha$ [T674I] <sup>1)</sup> | MSA      | CSKtide                | 1000         | 11             | 10    | Mg     | 5     | Staurosporine    |
| PDGFR $\alpha$ [V561D]               | MSA      | CSKtide                | 1000         | 35             | 50    | Mg     | 5     | Staurosporine    |
| PDGFR $\beta$                        | MSA      | CSKtide                | 1000         | 23             | 25    | Mg     | 5     | Staurosporine    |
| PDHK2 <sup>1)</sup>                  | MSA      | PDHKtide               | 1000         | 28             | 25    | Mg, K  | 5, 3  | DCA              |
| PDHK4 <sup>1)</sup>                  | MSA      | PDHKtide               | 1000         | 19             | 25    | Mg, K  | 5, 25 | DCA              |
| PDK1 <sup>1)8)</sup>                 | MSA      | T308tide               | 1000         | 9.6            | 10    | Mg     | 5     | Staurosporine    |
| PEK                                  | IMAP     | SRPKtide               | 100          | 13             | 10    | Mg     | 5     | Staurosporine    |
| PGK <sup>1)4)</sup>                  | MSA      | Kemptide               | 1000         | 8.2            | 10    | Mg     | 5     | Staurosporine    |
| PHKG1 <sup>1)</sup>                  | MSA      | GS peptide             | 1000         | 71             | 75    | Mg     | 5     | Staurosporine    |
| PHKG2                                | MSA      | GS peptide             | 1000         | 8.1            | 10    | Mg     | 5     | Staurosporine    |
| PIK3CA/PIK3R1                        | ADP-Glo  | PI(4,5)P2, POPS        | 10000, 5000  | 89             | 100   | Mg     | 5     | PI-103           |
| PIK3CB/PIK3R1                        | ADP-Glo  | PI(4,5)P2, POPS        | 10000, 5000  | 88             | 100   | Mg     | 5     | PI-103           |
| PIK3CD/PIK3R1                        | ADP-Glo  | PI(4,5)P2, POPS        | 10000, 5000  | 37             | 50    | Mg     | 5     | PI-103           |
| PIKFYVE                              | ADP-Glo  | PI(3)P, POPS           | 10000, 20000 | 36             | 50    | Mg     | 5     | AG-183           |

| Kinase                       | Platform | Substrate       |                 | ATP ( $\mu$ M) |       | Metal  |         | Positive control |
|------------------------------|----------|-----------------|-----------------|----------------|-------|--------|---------|------------------|
|                              |          | Name            | (nM)            | Km             | Assay | Name   | (mM)    |                  |
| PIM1                         | MSA      | S6K2 peptide    | 1000            | 640            | 500   | Mg     | 5       | Staurosporine    |
| PIM2 <sup>1)</sup>           | MSA      | S6K2 peptide    | 1000            | 4.0            | 5     | Mg     | 5       | Staurosporine    |
| PIM3                         | MSA      | S6K2 peptide    | 1000            | 130            | 150   | Mg     | 5       | Staurosporine    |
| PIP4K2A                      | ADP-Glo  | PI(5)P,<br>POPS | 10000,<br>20000 | 20             | 25    | Mg     | 5       | AG-183           |
| PIP4K2B                      | ADP-Glo  | PI(5)P,<br>POPS | 10000,<br>20000 | 18             | 25    | Mn     | 0.25    | AG-183           |
| PIP5K1A                      | ADP-Glo  | PI(4)P,<br>POPS | 10000,<br>20000 | 28             | 25    | Mg     | 5       | AG-183           |
| PIP5K1B                      | ADP-Glo  | PI(4)P,<br>POPS | 10000,<br>20000 | 95             | 100   | Mg     | 5       | AG-183           |
| PIP5K1C                      | ADP-Glo  | PI(4)P,<br>POPS | 10000,<br>20000 | 33             | 50    | Mg     | 5       | AG-183           |
| PIP5KL1                      | ADP-Glo  | PI(4)P,<br>POPS | 10000,<br>20000 | 1.0            | 1     | Mg     | 5       | AG-183           |
| PKAC $\alpha$                | MSA      | Kemptide        | 1000            | 2.6            | 5     | Mg     | 5       | Staurosporine    |
| PKAC $\beta$                 | MSA      | Kemptide        | 1000            | 4.7            | 5     | Mg     | 5       | Staurosporine    |
| PKAC $\gamma$ <sup>1)</sup>  | MSA      | Kemptide        | 1000            | 4.5            | 5     | Mg     | 5       | Staurosporine    |
| PKC $\alpha$ <sup>5)</sup>   | MSA      | PKC peptide     | 1000            | 36             | 50    | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\beta$ 1 <sup>5)</sup>  | MSA      | PKC peptide     | 1000            | 79             | 75    | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\beta$ 2 <sup>5)</sup>  | MSA      | PKC peptide     | 1000            | 41             | 50    | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\gamma$ <sup>5)</sup>   | MSA      | PKC peptide     | 1000            | 74             | 75    | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\delta$ <sup>5)</sup>   | MSA      | PKC peptide     | 1000            | 26             | 25    | Mg     | 5       | Staurosporine    |
| PKC $\epsilon$ <sup>5)</sup> | MSA      | PKC peptide     | 1000            | 16             | 25    | Mg     | 5       | Staurosporine    |
| PKC $\zeta$                  | MSA      | PKC peptide     | 1000            | 11             | 10    | Mg     | 5       | Staurosporine    |
| PKC $\eta$ <sup>5)</sup>     | MSA      | PKC peptide     | 1000            | 36             | 50    | Mg     | 5       | Staurosporine    |
| PKC $\theta$ <sup>5)</sup>   | MSA      | PKC peptide     | 1000            | 18             | 25    | Mg     | 5       | Staurosporine    |
| PKC $\iota$                  | MSA      | PKC peptide     | 1000            | 27             | 25    | Mg     | 5       | Staurosporine    |
| PKD1                         | MSA      | GS peptide      | 1000            | 25             | 25    | Mg     | 5       | Staurosporine    |
| PKD2                         | MSA      | GS peptide      | 1000            | 26             | 25    | Mg     | 5       | Staurosporine    |
| PKD3                         | MSA      | GS peptide      | 1000            | 34             | 50    | Mg     | 5       | Staurosporine    |
| PKN1                         | IMAP     | S6K peptide     | 100             | 19             | 25    | Mg     | 1       | Staurosporine    |
| PKR                          | IMAP     | SRPKtide        | 100             | 13             | 10    | Mg     | 5       | Staurosporine    |
| PLK1 <sup>1)</sup>           | MSA      | CDC25ctide      | 1000            | 5.6            | 5     | Mg     | 5       | GW843682X        |
| PLK2                         | IMAP     | CHK2 peptide    | 50              | 30             | 30    | Mg     | 10      | GW843682X        |
| PLK3                         | MSA      | CDC25ctide      | 1000            | 6.8            | 5     | Mg     | 5       | GW843682X        |
| PRKX <sup>1)</sup>           | MSA      | Kemptide        | 1000            | 20             | 25    | Mg     | 5       | Staurosporine    |
| PYK2                         | MSA      | Btk/Lyntide     | 1000            | 56             | 50    | Mg     | 5       | Staurosporine    |
| QIK                          | MSA      | AMARA peptide   | 1000            | 42             | 50    | Mg     | 5       | Staurosporine    |
| RET                          | MSA      | CSKtide         | 1000            | 7.5            | 10    | Mg     | 5       | Staurosporine    |
| RET[G691S]                   | MSA      | CSKtide         | 1000            | 13             | 10    | Mg     | 5       | Staurosporine    |
| RET[M918T]                   | MSA      | CSKtide         | 1000            | 4.2            | 5     | Mg     | 5       | Staurosporine    |
| RET[S891A]                   | MSA      | CSKtide         | 1000            | 11             | 10    | Mg     | 5       | Staurosporine    |
| RET[Y791F]                   | MSA      | CSKtide         | 1000            | 29             | 25    | Mg     | 5       | Staurosporine    |
| ROCK1                        | MSA      | LIMKtide        | 1000            | 3.1            | 5     | Mg     | 5       | Staurosporine    |
| ROCK2                        | MSA      | LIMKtide        | 1000            | 7.4            | 5     | Mg     | 5       | Staurosporine    |
| RON                          | MSA      | Srctide         | 1000            | 27             | 25    | Mg     | 5       | Staurosporine    |
| ROS                          | MSA      | IRS1            | 1000            | 37             | 50    | Mg     | 5       | Staurosporine    |

| Kinase               | Platform | Substrate              |      | ATP ( $\mu$ M) |       | Metal  |      | Positive control |
|----------------------|----------|------------------------|------|----------------|-------|--------|------|------------------|
|                      |          | Name                   | (nM) | Km             | Assay | Name   | (mM) |                  |
| RSK1                 | MSA      | S6K peptide (N-FL)     | 1000 | 21             | 25    | Mg     | 5    | Staurosporine    |
| RSK2                 | MSA      | S6K peptide (N-FL)     | 1000 | 14             | 10    | Mg     | 5    | Staurosporine    |
| RSK3                 | MSA      | S6K peptide (N-FL)     | 1000 | 9.9            | 10    | Mg     | 5    | Staurosporine    |
| RSK4                 | MSA      | S6K peptide (N-FL)     | 1000 | 20             | 25    | Mg     | 5    | Staurosporine    |
| SGK                  | MSA      | SGKtide                | 1000 | 52             | 50    | Mg     | 5    | Staurosporine    |
| SGK2                 | MSA      | SGKtide                | 1000 | 58             | 50    | Mg     | 5    | Staurosporine    |
| SGK3                 | MSA      | SGKtide                | 1000 | 17             | 25    | Mg     | 5    | Staurosporine    |
| SIK <sup>1)</sup>    | MSA      | AMARA peptide          | 1000 | 47             | 50    | Mg     | 5    | Staurosporine    |
| skMLCK <sup>3)</sup> | MSA      | MLCtide                | 1000 | 820            | 1000  | Mg     | 5    | Staurosporine    |
| SLK <sup>1)</sup>    | MSA      | Moesin-derived peptide | 1000 | 36             | 50    | Mg     | 5    | Staurosporine    |
| SPHK1                | MSA      | Sphingosine            | 1000 | 20             | 25    | Mg     | 5    | PF-543           |
| SPHK2                | MSA      | Sphingosine            | 1000 | 620            | 600   | Mg     | 5    | PF-543           |
| SRC                  | MSA      | Srctide                | 1000 | 31             | 50    | Mg     | 5    | Staurosporine    |
| SRM                  | MSA      | Blk/Lyntide            | 1000 | 38             | 50    | Mg     | 5    | Staurosporine    |
| SRPK1                | IMAP     | SRPKtide               | 100  | 200            | 100   | Mg     | 10   | Staurosporine    |
| SRPK2 <sup>1)</sup>  | MSA      | DYRKtide-F             | 1000 | 14             | 10    | Mg     | 5    | Staurosporine    |
| SYK                  | MSA      | Blk/Lyntide            | 1000 | 59             | 50    | Mg     | 5    | Staurosporine    |
| TAK1-TAB1            | MSA      | LRRKtide               | 1000 | 37             | 50    | Mg     | 1.25 | Staurosporine    |
| TAOK2 <sup>17)</sup> | MSA      | TAOKtide               | 1000 | 39             | 50    | Mg     | 5    | Staurosporine    |
| TBK1                 | MSA      | CKtide                 | 1000 | 21             | 25    | Mg     | 5    | Staurosporine    |
| TEC                  | MSA      | Srctide                | 1000 | 55             | 50    | Mg     | 5    | Staurosporine    |
| TIE2                 | MSA      | Blk/Lyntide            | 1000 | 94             | 100   | Mg     | 5    | Staurosporine    |
| TNIK                 | MSA      | Moesin-derived peptide | 1000 | 16             | 25    | Mg     | 5    | Staurosporine    |
| TNK1 <sup>1)</sup>   | MSA      | CSKtide                | 1000 | 71             | 75    | Mg     | 5    | Staurosporine    |
| TRKA                 | MSA      | CSKtide                | 1000 | 65             | 75    | Mg     | 5    | Staurosporine    |
| TRKB                 | MSA      | Srctide                | 1000 | 80             | 75    | Mg     | 5    | Staurosporine    |
| TRKC                 | MSA      | Srctide                | 1000 | 47             | 50    | Mg     | 5    | Staurosporine    |
| TSSK1                | MSA      | GS peptide             | 1000 | 11             | 10    | Mg     | 5    | Staurosporine    |
| TSSK2 <sup>1)</sup>  | MSA      | GS peptide             | 1000 | 8.8            | 10    | Mg     | 5    | Staurosporine    |
| TSSK3 <sup>1)</sup>  | MSA      | GS peptide             | 1000 | 45             | 50    | Mg     | 5    | Staurosporine    |
| TXK <sup>1)</sup>    | MSA      | Srctide                | 1000 | 110            | 100   | Mg     | 5    | Staurosporine    |
| TYK2 <sup>1)</sup>   | MSA      | Srctide                | 1000 | 18             | 25    | Mg     | 5    | Staurosporine    |
| TYRO3                | MSA      | CSKtide                | 1000 | 80             | 75    | Mg     | 5    | Staurosporine    |
| WNK1 <sup>1)</sup>   | MSA      | SPAKtide               | 1000 | 140            | 150   | Mg, Mn | 5, 3 | K252a            |
| WNK2 <sup>1)</sup>   | MSA      | SPAKtide               | 1000 | 48             | 50    | Mg, Mn | 5, 3 | K252a            |
| WNK3 <sup>1)</sup>   | MSA      | SPAKtide               | 1000 | 48             | 50    | Mg, Mn | 5, 3 | K252a            |
| YES                  | MSA      | Srctide                | 1000 | 13             | 10    | Mg     | 5    | Staurosporine    |
| YES[T348I]           | MSA      | Srctide                | 1000 | 8.5            | 10    | Mg     | 5    | Staurosporine    |
| ZAP70                | MSA      | Blk/Lyntide            | 1000 | 3.3            | 5     | Mg, Mn | 5, 1 | Staurosporine    |

**ATP 1mM**

| Kinase                                 | Platform | Substrate           |      | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|--|----------|---------------------|------|----------------|-------|-------|------|------------------|
|  |          | Name                | (nM) | Km             | Assay | Name  | (mM) |                  |
| ABL                                    | MSA      | ABLTide             | 1000 | 16             | 1000  | Mg    | 5    | Staurosporine    |
| ABL[E255K]                             | MSA      | ABLTide             | 1000 | 17             | 1000  | Mg    | 5    | Staurosporine    |
| ABL[T315I]                             | MSA      | ABLTide             | 1000 | 4.0            | 1000  | Mg    | 5    | Staurosporine    |
| ACK <sup>1)</sup>                      | MSA      | WASP peptide        | 1000 | 97             | 1000  | Mg    | 5    | Staurosporine    |
| AKT1                                   | MSA      | Crosstide           | 1000 | 31             | 1000  | Mg    | 5    | Staurosporine    |
| ALK                                    | MSA      | Srctide             | 1000 | 57             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[C1156Y]                            | MSA      | Srctide             | 1000 | 64             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[F1174L]                            | MSA      | Srctide             | 1000 | 49             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[G1202R]                            | MSA      | Srctide             | 1000 | 31             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[G1269A]                            | MSA      | Srctide             | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[L1196M]                            | MSA      | Srctide             | 1000 | 57             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[R1275Q]                            | MSA      | Srctide             | 1000 | 84             | 1000  | Mg    | 5    | Staurosporine    |
| ALK[T1151_L1152insT]                   | MSA      | Srctide             | 1000 | 110            | 1000  | Mg    | 5    | Staurosporine    |
| EML4-ALK <sup>1)</sup>                 | MSA      | Srctide             | 1000 | 43             | 1000  | Mg    | 5    | Staurosporine    |
| NPM1-ALK                               | MSA      | Srctide             | 1000 | 57             | 1000  | Mg    | 5    | Staurosporine    |
| AMPK $\alpha$ 1/ $\beta$ 1/ $\gamma$ 1 | MSA      | SAMS peptide        | 1000 | 130            | 1000  | Mg    | 5    | Staurosporine    |
| ARG                                    | MSA      | ABLTide             | 1000 | 24             | 1000  | Mg    | 5    | Staurosporine    |
| AurA                                   | MSA      | Kemptide            | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| AurB/INCENP                            | MSA      | Kemptide            | 1000 | 16             | 1000  | Mg    | 5    | Staurosporine    |
| AurC                                   | MSA      | Kemptide            | 1000 | 24             | 1000  | Mg    | 5    | Staurosporine    |
| AXL                                    | MSA      | CSKtide             | 1000 | 32             | 1000  | Mg    | 5    | Staurosporine    |
| BLK                                    | MSA      | Srctide             | 1000 | 62             | 1000  | Mg    | 5    | Staurosporine    |
| BMX                                    | MSA      | Srctide             | 1000 | 75             | 1000  | Mg    | 5    | Staurosporine    |
| BRK <sup>1)</sup>                      | MSA      | Blk/Lyntide         | 1000 | 250            | 1000  | Mg    | 5    | Staurosporine    |
| BRSK1                                  | MSA      | CHKtide             | 1000 | 30             | 1000  | Mg    | 5    | Staurosporine    |
| BTK                                    | MSA      | Srctide             | 1000 | 22             | 1000  | Mg    | 5    | Staurosporine    |
| BTK[C481S]                             | MSA      | Srctide             | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| CaMK2 $\beta$ <sup>3)</sup>            | MSA      | GS peptide          | 1000 | 19             | 1000  | Mg    | 5    | Staurosporine    |
| CaMK4 <sup>3)</sup>                    | MSA      | GS peptide          | 1000 | 20             | 1000  | Mg    | 5    | Staurosporine    |
| CDC2/CycB1                             | MSA      | Modified Histone H1 | 1000 | 34             | 1000  | Mg    | 5    | Staurosporine    |
| CDC7/ASK <sup>1)</sup>                 | MSA      | MCM2 peptide        | 1000 | 2.8            | 1000  | Mg    | 10   | Staurosporine    |
| CDK2/CycA2                             | MSA      | Modified Histone H1 | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| CDK2/CycE1                             | MSA      | Modified Histone H1 | 1000 | 130            | 1000  | Mg    | 5    | Staurosporine    |
| CDK4/CycD3 <sup>1)</sup>               | MSA      | DYRKtide-F          | 1000 | 200            | 1000  | Mg    | 5    | Staurosporine    |
| CDK5/p25                               | MSA      | Modified Histone H1 | 1000 | 10             | 1000  | Mg    | 5    | Staurosporine    |
| CDK6/CycD3 <sup>1)</sup>               | MSA      | DYRKtide-F          | 1000 | 330            | 1000  | Mg    | 5    | Staurosporine    |
| CDK7/CycH/MAT1 <sup>1)</sup>           | MSA      | CTD3 peptide        | 1000 | 32             | 1000  | Mg    | 5    | Staurosporine    |
| CDK9/CycT1 <sup>1)</sup>               | MSA      | CDK9 substrate      | 1000 | 9.4            | 1000  | Mg    | 5    | Staurosporine    |
| CHK1                                   | MSA      | CHKtide             | 1000 | 50             | 1000  | Mg    | 5    | Staurosporine    |
| CHK2                                   | MSA      | CHKtide             | 1000 | 51             | 1000  | Mg    | 5    | Staurosporine    |
| CK1 $\alpha$ <sup>1)</sup>             | MSA      | CKtide              | 1000 | 4.1            | 1000  | Mg    | 5    | 5-Iodotubercidin |
| CK1 $\delta$                           | MSA      | CKtide              | 1000 | 7.7            | 1000  | Mg    | 5    | 5-Iodotubercidin |
| CK1 $\epsilon$ <sup>1)</sup>           | MSA      | CKtide              | 1000 | 16             | 1000  | Mg    | 5    | 5-Iodotubercidin |
| CK2 $\alpha$ 1/ $\beta$                | MSA      | CK2tide             | 1000 | 2.9            | 1000  | Mg    | 5    | TBB              |
| CLK1                                   | MSA      | DYRKtide-F          | 1000 | 11             | 1000  | Mg    | 5    | Staurosporine    |



| Kinase                     | Platform | Substrate        |      | ATP ( $\mu$ M) |       | Metal  |      | Positive control |
|----------------------------|----------|------------------|------|----------------|-------|--------|------|------------------|
|                            |          | Name             | (nM) | Km             | Assay | Name   | (mM) |                  |
| CLK2                       | MSA      | DYRKtide-F       | 1000 | 140            | 1000  | Mg     | 5    | Staurosporine    |
| CSK <sup>1)</sup>          | MSA      | Srctide          | 1000 | 4.8            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| DAPK1                      | MSA      | DAPK1tide        | 1000 | 1.1            | 1000  | Mg     | 5    | Staurosporine    |
| DDR1 <sup>1)</sup>         | MSA      | IRS1             | 1000 | 94             | 1000  | Mg     | 5    | Staurosporine    |
| DDR2 <sup>1)</sup>         | MSA      | IRS1             | 1000 | 38             | 1000  | Mg     | 5    | Staurosporine    |
| DYRK1A                     | MSA      | DYRKtide-F       | 1000 | 16             | 1000  | Mg     | 5    | Staurosporine    |
| DYRK1B                     | MSA      | DYRKtide-F       | 1000 | 59             | 1000  | Mg     | 5    | Staurosporine    |
| DYRK2                      | MSA      | DYRKtide-F       | 1000 | 7.7            | 1000  | Mg     | 5    | Staurosporine    |
| DYRK3                      | MSA      | DYRKtide-F       | 1000 | 6.8            | 1000  | Mg     | 5    | Staurosporine    |
| EGFR                       | MSA      | Srctide          | 1000 | 2.7            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[C797S/L858R]          | MSA      | Srctide          | 1000 | 4.1            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750]             | MSA      | Srctide          | 1000 | 19             | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/C797S]       | MSA      | Srctide          | 1000 | 8.2            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/T790M]       | MSA      | Srctide          | 1000 | 5.4            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[d746-750/T790M/C797S] | MSA      | Srctide          | 1000 | 1.8            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[D770_N771insNPG]      | MSA      | Srctide          | 1000 | 2.3            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[L858R]                | MSA      | Srctide          | 1000 | 9.8            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[L861Q]                | MSA      | Srctide          | 1000 | 7.5            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[T790M]                | MSA      | Srctide          | 1000 | 0.90           | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[T790M/C797S/L858R]    | MSA      | Srctide          | 1000 | 0.85           | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EGFR[T790M/L858R]          | MSA      | Srctide          | 1000 | 1.9            | 1000  | Mg, Mn | 5, 1 | Staurosporine    |
| EPHA1                      | MSA      | Blk/Lyntide      | 1000 | 22             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA2                      | MSA      | Blk/Lyntide      | 1000 | 67             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA3                      | MSA      | Blk/Lyntide      | 1000 | 170            | 1000  | Mg     | 5    | Staurosporine    |
| EPHA4                      | MSA      | Blk/Lyntide      | 1000 | 52             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA5                      | MSA      | Blk/Lyntide      | 1000 | 56             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA6                      | MSA      | Blk/Lyntide      | 1000 | 27             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA7                      | MSA      | Blk/Lyntide      | 1000 | 58             | 1000  | Mg     | 5    | Staurosporine    |
| EPHA8                      | MSA      | Blk/Lyntide      | 1000 | 69             | 1000  | Mg     | 5    | Staurosporine    |
| EPHB1                      | MSA      | Blk/Lyntide      | 1000 | 29             | 1000  | Mg     | 5    | Staurosporine    |
| EPHB2                      | MSA      | Blk/Lyntide      | 1000 | 86             | 1000  | Mg     | 5    | Staurosporine    |
| EPHB3                      | MSA      | Blk/Lyntide      | 1000 | 49             | 1000  | Mg     | 5    | Staurosporine    |
| EPHB4                      | MSA      | Blk/Lyntide      | 1000 | 56             | 1000  | Mg     | 5    | Staurosporine    |
| Erk1                       | MSA      | Modified Erktide | 1000 | 34             | 1000  | Mg     | 5    | K252a            |
| Erk2                       | MSA      | Modified Erktide | 1000 | 33             | 1000  | Mg     | 5    | K252a            |
| FAK <sup>1)</sup>          | MSA      | Blk/Lyntide      | 1000 | 25             | 1000  | Mg     | 5    | Staurosporine    |
| FER                        | MSA      | Srctide          | 1000 | 26             | 1000  | Mg     | 5    | Staurosporine    |
| FES                        | MSA      | Srctide          | 1000 | 43             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR1                      | MSA      | CSKtide          | 1000 | 89             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR1[V561M]               | MSA      | CSKtide          | 1000 | 33             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR2                      | MSA      | CSKtide          | 1000 | 66             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR2[V564I]               | MSA      | CSKtide          | 1000 | 21             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR3                      | MSA      | CSKtide          | 1000 | 43             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR3[K650E]               | MSA      | CSKtide          | 1000 | 41             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR3[K650M]               | MSA      | CSKtide          | 1000 | 17             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR3[V555L]               | MSA      | CSKtide          | 1000 | 29             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR3[V555M]               | MSA      | CSKtide          | 1000 | 37             | 1000  | Mg     | 5    | Staurosporine    |
| FGFR4                      | MSA      | CSKtide          | 1000 | 230            | 1000  | Mg     | 5    | Staurosporine    |

| Kinase                   | Platform | Substrate                                       |      | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|--------------------------|----------|---|------|----------------|-------|-------|------|------------------|
|                          |          | Name  | (nM) | Km             | Assay | Name  | (mM) |                  |
| FGFR4[N535K]             | MSA      | CSKtide   | 1000 | 30             | 1000  | Mg    | 5    | Staurosporine    |
| FGFR4[V550E]             | MSA      | CSKtide   | 1000 | 210            | 1000  | Mg    | 5    | Staurosporine    |
| FGFR4[V550L]             | MSA      | CSKtide   | 1000 | 160            | 1000  | Mg    | 5    | Staurosporine    |
| FGR                      | MSA      | Srctide   | 1000 | 34             | 1000  | Mg    | 5    | Staurosporine    |
| FLT1                     | MSA      | CSKtide   | 1000 | 140            | 1000  | Mg    | 5    | Staurosporine    |
| FLT3                     | MSA      | Srctide   | 1000 | 94             | 1000  | Mg    | 5    | Staurosporine    |
| FLT4                     | MSA      | CSKtide   | 1000 | 72             | 1000  | Mg    | 5    | Staurosporine    |
| FMS                      | MSA      | Srctide   | 1000 | 26             | 1000  | Mg    | 5    | Staurosporine    |
| FRK                      | MSA      | Srctide   | 1000 | 62             | 1000  | Mg    | 5    | Staurosporine    |
| FYN[isoform a]           | MSA      | Srctide   | 1000 | 36             | 1000  | Mg    | 5    | Staurosporine    |
| FYN[isoform b]           | MSA      | Srctide   | 1000 | 20             | 1000  | Mg    | 5    | Staurosporine    |
| GSK3 $\alpha$            | MSA      | CREBtide-p                                      | 1000 | 12             | 1000  | Mg    | 5    | Staurosporine    |
| GSK3 $\beta$             | MSA      | CREBtide-p                                      | 1000 | 9.1            | 1000  | Mg    | 5    | Staurosporine    |
| HCK                      | MSA      | Srctide   | 1000 | 11             | 1000  | Mg    | 5    | Staurosporine    |
| HER2                     | MSA      | Srctide   | 1000 | 3.5            | 1000  | Mn    | 5    | Staurosporine    |
| HER4                     | MSA      | Srctide   | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| HGK                      | MSA      | Moesin-derived peptide                          | 1000 | 9.4            | 1000  | Mg    | 5    | Staurosporine    |
| HIPK3                    | MSA      | DYRKtide-F                                      | 1000 | 7.3            | 1000  | Mg    | 5    | Staurosporine    |
| HIPK4                    | MSA      | DYRKtide-F                                      | 1000 | 7.0            | 1000  | Mg    | 5    | Staurosporine    |
| IGF1R                    | MSA      | IRS1  | 1000 | 63             | 1000  | Mg    | 5    | Staurosporine    |
| IKK $\beta$              | MSA      | Modified I $\kappa$ B $\alpha$ -derived peptide | 1000 | 16             | 1000  | Mg    | 5    | Staurosporine    |
| INSR                     | MSA      | IRS1  | 1000 | 58             | 1000  | Mg    | 5    | Staurosporine    |
| IRR                      | MSA      | IRS1  | 1000 | 64             | 1000  | Mg    | 5    | Staurosporine    |
| ITK                      | MSA      | Srctide   | 1000 | 6.1            | 1000  | Mg    | 5    | Staurosporine    |
| JAK1 <sup>1)6)</sup>     | MSA      | JAK1 substrate peptide                          | 1000 | 68             | 1000  | Mg    | 5    | Staurosporine    |
| JAK2                     | MSA      | Srctide   | 1000 | 13             | 1000  | Mg    | 5    | Staurosporine    |
| JAK3                     | MSA      | Srctide   | 1000 | 3.5            | 1000  | Mg    | 5    | Staurosporine    |
| JNK1                     | MSA      | Modified Erktide                                | 1000 | 29             | 1000  | Mg    | 5    | K252a            |
| JNK2                     | MSA      | Modified Erktide                                | 1000 | 21             | 1000  | Mg    | 5    | K252a            |
| JNK3                     | MSA      | Modified Erktide                                | 1000 | 6.0            | 1000  | Mg    | 5    | K252a            |
| KDR                      | MSA      | CSKtide   | 1000 | 74             | 1000  | Mg    | 5    | Staurosporine    |
| KIT <sup>6)</sup>        | MSA      | Srctide   | 1000 | 370            | 1000  | Mg    | 5    | Staurosporine    |
| KIT[D816E] <sup>6)</sup> | MSA      | Srctide   | 1000 | 40             | 1000  | Mg    | 5    | Staurosporine    |
| KIT[D816V] <sup>6)</sup> | MSA      | Srctide   | 1000 | 14             | 1000  | Mg    | 5    | Staurosporine    |
| KIT[D816Y] <sup>6)</sup> | MSA      | Srctide   | 1000 | 22             | 1000  | Mg    | 5    | Staurosporine    |
| KIT[T670I] <sup>6)</sup> | MSA      | Srctide   | 1000 | 100            | 1000  | Mg    | 5    | Staurosporine    |
| KIT[V560G] <sup>6)</sup> | MSA      | Srctide   | 1000 | 110            | 1000  | Mg    | 5    | Staurosporine    |
| KIT[V654A] <sup>6)</sup> | MSA      | Srctide   | 1000 | 220            | 1000  | Mg    | 5    | Staurosporine    |
| LATS2 <sup>1)</sup>      | MSA      | SGKtide   | 1000 | 380            | 1000  | Mg    | 5    | Staurosporine    |
| LCK                      | MSA      | Srctide   | 1000 | 14             | 1000  | Mg    | 5    | Staurosporine    |
| LTK                      | MSA      | Srctide   | 1000 | 49             | 1000  | Mg    | 5    | Staurosporine    |
| LYNa                     | MSA      | Srctide   | 1000 | 14             | 1000  | Mg    | 5    | Staurosporine    |
| LYNb                     | MSA      | Srctide   | 1000 | 18             | 1000  | Mg    | 5    | Staurosporine    |
| MAPKAPK2                 | MSA      | GS peptide                                      | 1000 | 3.6            | 1000  | Mg    | 5    | Staurosporine    |
| MARK4                    | MSA      | CHKtide   | 1000 | 12             | 1000  | Mg    | 5    | Staurosporine    |
| MER                      | MSA      | CSKtide   | 1000 | 36             | 1000  | Mg    | 5    | Staurosporine    |
| MET                      | MSA      | Srctide   | 1000 | 27             | 1000  | Mg    | 5    | Staurosporine    |
| MET[D1228H]              | MSA      | Srctide   | 1000 | 25             | 1000  | Mg    | 5    | Staurosporine    |

| Kinase                               | Platform | Substrate          |      | ATP ( $\mu$ M) |       | Metal  |         | Positive control |
|--------------------------------------|----------|--------------------|------|----------------|-------|--------|---------|------------------|
|                                      |          | Name               | (nM) | Km             | Assay | Name   | (mM)    |                  |
| MET[M1250T]                          | MSA      | Srctide            | 1000 | 17             | 1000  | Mg     | 5       | Staurosporine    |
| MET[Y1235D]                          | MSA      | Srctide            | 1000 | 71             | 1000  | Mg     | 5       | Staurosporine    |
| MINK <sup>1)</sup>                   | MSA      | Modified Erktide   | 1000 | 16             | 1000  | Mg     | 5       | K252a            |
| MNK2                                 | MSA      | RS peptide         | 1000 | 110            | 1000  | Mg     | 5       | Staurosporine    |
| MST1 <sup>1)2)</sup>                 | MSA      | IRS1               | 1000 | 50             | 1000  | Mg     | 5       | Staurosporine    |
| MST2 <sup>1)7)</sup>                 | MSA      | IRS1               | 1000 | 69             | 1000  | Mg     | 5       | Staurosporine    |
| MUSK <sup>1)</sup>                   | MSA      | CSKtide            | 1000 | 14             | 1000  | Mg, Mn | 5, 1    | Staurosporine    |
| NEK1 <sup>1)</sup>                   | MSA      | CDK7 peptide       | 1000 | 64             | 1000  | Mg     | 5       | Staurosporine    |
| NEK2                                 | MSA      | CDK7 peptide       | 1000 | 65             | 1000  | Mg     | 5       | Staurosporine    |
| NEK6 <sup>1)</sup>                   | MSA      | CDK7 peptide       | 1000 | 69             | 1000  | Mg     | 5       | PKR Inhibitor    |
| NEK7 <sup>1)</sup>                   | MSA      | CDK7 peptide       | 1000 | 40             | 1000  | Mg     | 5       | PKR Inhibitor    |
| NEK9 <sup>1)</sup>                   | MSA      | CDK7 peptide       | 1000 | 190            | 1000  | Mg     | 5       | Staurosporine    |
| NuaK1                                | MSA      | CHKtide            | 1000 | 59             | 1000  | Mg     | 5       | Staurosporine    |
| NuaK2                                | MSA      | CHKtide            | 1000 | 26             | 1000  | Mg     | 5       | Staurosporine    |
| p38 $\alpha$                         | MSA      | Modified Erktide   | 1000 | 150            | 1000  | Mg     | 5       | SB202190         |
| p38 $\beta$                          | MSA      | Modified Erktide   | 1000 | 63             | 1000  | Mg     | 5       | SB202190         |
| p38 $\gamma$                         | MSA      | Modified Erktide   | 1000 | 13             | 1000  | Mg     | 5       | Staurosporine    |
| p38 $\delta$                         | MSA      | Modified Erktide   | 1000 | 5.8            | 1000  | Mg     | 5       | Staurosporine    |
| p70S6K                               | MSA      | S6K2 peptide       | 1000 | 14             | 1000  | Mg     | 5       | Staurosporine    |
| PAK1                                 | MSA      | LIMKtide           | 1000 | 300            | 1000  | Mg     | 5       | Staurosporine    |
| PAK2                                 | MSA      | DAPK1tide          | 1000 | 81             | 1000  | Mg     | 5       | Staurosporine    |
| PAK5                                 | MSA      | DAPK1tide          | 1000 | 1.9            | 1000  | Mg     | 5       | Staurosporine    |
| PASK <sup>1)</sup>                   | MSA      | GS peptide         | 1000 | 9.7            | 1000  | Mg     | 5       | Staurosporine    |
| PBK <sup>1)</sup>                    | MSA      | Histone H3 peptide | 1000 | 33             | 1000  | Mg     | 5       | Staurosporine    |
| PDGFR $\alpha$                       | MSA      | CSKtide            | 1000 | 28             | 1000  | Mg     | 5       | Staurosporine    |
| PDGFR $\alpha$ [D842V]               | MSA      | CSKtide            | 1000 | 21             | 1000  | Mg     | 5       | Staurosporine    |
| PDGFR $\alpha$ [T674I] <sup>1)</sup> | MSA      | CSKtide            | 1000 | 11             | 1000  | Mg     | 5       | Staurosporine    |
| PDGFR $\alpha$ [V561D]               | MSA      | CSKtide            | 1000 | 35             | 1000  | Mg     | 5       | Staurosporine    |
| PDGFR $\beta$                        | MSA      | CSKtide            | 1000 | 23             | 1000  | Mg     | 5       | Staurosporine    |
| PDK1 <sup>1)8)</sup>                 | MSA      | T308tide           | 1000 | 9.6            | 1000  | Mg     | 5       | Staurosporine    |
| PIM1                                 | MSA      | S6K2 peptide       | 1000 | 640            | 1000  | Mg     | 5       | Staurosporine    |
| PIM2 <sup>1)</sup>                   | MSA      | S6K2 peptide       | 1000 | 4.0            | 1000  | Mg     | 5       | Staurosporine    |
| PIM3                                 | MSA      | S6K2 peptide       | 1000 | 130            | 1000  | Mg     | 5       | Staurosporine    |
| PKAC $\alpha$                        | MSA      | Kemptide           | 1000 | 2.6            | 1000  | Mg     | 5       | Staurosporine    |
| PKC $\alpha$ <sup>5)</sup>           | MSA      | PKC peptide        | 1000 | 36             | 1000  | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\gamma$ <sup>5)</sup>           | MSA      | PKC peptide        | 1000 | 74             | 1000  | Mg, Ca | 5, 0.05 | Staurosporine    |
| PKC $\epsilon$ <sup>5)</sup>         | MSA      | PKC peptide        | 1000 | 16             | 1000  | Mg     | 5       | Staurosporine    |
| PKD2                                 | MSA      | GS peptide         | 1000 | 26             | 1000  | Mg     | 5       | Staurosporine    |
| PLK1 <sup>1)</sup>                   | MSA      | CDC25ctide         | 1000 | 5.6            | 1000  | Mg     | 5       | GW843682X        |
| PLK3                                 | MSA      | CDC25ctide         | 1000 | 6.8            | 1000  | Mg     | 5       | GW843682X        |
| PYK2                                 | MSA      | Blk/Lyntide        | 1000 | 56             | 1000  | Mg     | 5       | Staurosporine    |
| QIK                                  | MSA      | AMARA peptide      | 1000 | 42             | 1000  | Mg     | 5       | Staurosporine    |
| RET                                  | MSA      | CSKtide            | 1000 | 7.5            | 1000  | Mg     | 5       | Staurosporine    |
| RET[G691S]                           | MSA      | CSKtide            | 1000 | 13             | 1000  | Mg     | 5       | Staurosporine    |
| RET[M918T]                           | MSA      | CSKtide            | 1000 | 4.2            | 1000  | Mg     | 5       | Staurosporine    |
| RET[S891A]                           | MSA      | CSKtide            | 1000 | 11             | 1000  | Mg     | 5       | Staurosporine    |
| RET[Y791F]                           | MSA      | CSKtide            | 1000 | 29             | 1000  | Mg     | 5       | Staurosporine    |
| ROCK1                                | MSA      | LIMKtide           | 1000 | 3.1            | 1000  | Mg     | 5       | Staurosporine    |

| Kinase                | Platform | Substrate              |      | ATP ( $\mu\text{M}$ ) |       | Metal  |      | Positive control |
|-----------------------|----------|------------------------|------|-----------------------|-------|--------|------|------------------|
|                       |          | Name                   | (nM) | Km                    | Assay | Name   | (mM) |                  |
| ROCK2                 | MSA      | LIMKtide               | 1000 | 7.4                   | 1000  | Mg     | 5    | Staurosporine    |
| RON                   | MSA      | Srctide                | 1000 | 27                    | 1000  | Mg     | 5    | Staurosporine    |
| ROS                   | MSA      | IRS1                   | 1000 | 37                    | 1000  | Mg     | 5    | Staurosporine    |
| RSK1                  | MSA      | S6K peptide (N-FL)     | 1000 | 21                    | 1000  | Mg     | 5    | Staurosporine    |
| RSK3                  | MSA      | S6K peptide (N-FL)     | 1000 | 9.9                   | 1000  | Mg     | 5    | Staurosporine    |
| RSK4                  | MSA      | S6K peptide (N-FL)     | 1000 | 20                    | 1000  | Mg     | 5    | Staurosporine    |
| SGK                   | MSA      | SGKtide                | 1000 | 52                    | 1000  | Mg     | 5    | Staurosporine    |
| SIK <sup>1)</sup>     | MSA      | AMARA peptide          | 1000 | 47                    | 1000  | Mg     | 5    | Staurosporine    |
| SRC                   | MSA      | Srctide                | 1000 | 31                    | 1000  | Mg     | 5    | Staurosporine    |
| SRM                   | MSA      | Blk/Lyntide            | 1000 | 38                    | 1000  | Mg     | 5    | Staurosporine    |
| SYK                   | MSA      | Blk/Lyntide            | 1000 | 59                    | 1000  | Mg     | 5    | Staurosporine    |
| TAK1-TAB1             | MSA      | LRRKtide               | 1000 | 37                    | 1000  | Mg     | 1.25 | Staurosporine    |
| TAOK2 <sup>1)7)</sup> | MSA      | TAOKtide               | 1000 | 39                    | 1000  | Mg     | 5    | Staurosporine    |
| TEC                   | MSA      | Srctide                | 1000 | 55                    | 1000  | Mg     | 5    | Staurosporine    |
| TIE2                  | MSA      | Blk/Lyntide            | 1000 | 94                    | 1000  | Mg     | 5    | Staurosporine    |
| TNIK                  | MSA      | Moesin-derived peptide | 1000 | 16                    | 1000  | Mg     | 5    | Staurosporine    |
| TNK1 <sup>1)</sup>    | MSA      | CSKtide                | 1000 | 71                    | 1000  | Mg     | 5    | Staurosporine    |
| TRKA                  | MSA      | CSKtide                | 1000 | 65                    | 1000  | Mg     | 5    | Staurosporine    |
| TRKB                  | MSA      | Srctide                | 1000 | 80                    | 1000  | Mg     | 5    | Staurosporine    |
| TRKC                  | MSA      | Srctide                | 1000 | 47                    | 1000  | Mg     | 5    | Staurosporine    |
| TSSK1                 | MSA      | GS peptide             | 1000 | 11                    | 1000  | Mg     | 5    | Staurosporine    |
| TXK <sup>1)</sup>     | MSA      | Srctide                | 1000 | 110                   | 1000  | Mg     | 5    | Staurosporine    |
| TYK2 <sup>1)</sup>    | MSA      | Srctide                | 1000 | 18                    | 1000  | Mg     | 5    | Staurosporine    |
| TYRO3                 | MSA      | CSKtide                | 1000 | 80                    | 1000  | Mg     | 5    | Staurosporine    |
| YES                   | MSA      | Srctide                | 1000 | 13                    | 1000  | Mg     | 5    | Staurosporine    |
| YES[T348I]            | MSA      | Srctide                | 1000 | 8.5                   | 1000  | Mg     | 5    | Staurosporine    |
| ZAP70                 | MSA      | Blk/Lyntide            | 1000 | 3.3                   | 1000  | Mg, Mn | 5, 1 | Staurosporine    |

- 1) Reaction time is 5 hours.
- 2) Cantharidin mixed in Substrate/ATP/Metal solution is added at the final concentration of 20  $\mu\text{M}$ .
- 3)  $\text{CaCl}_2$  and Calmodulin mixed in Substrate/ATP/Metal solution are added at the final concentration of 1 mM and 10  $\mu\text{g/ml}$ , respectively.
- 4) cGMP mixed in Substrate/ATP/Metal solution is added at the final concentration of 5  $\mu\text{M}$ .
- 5) Phosphatidylserine and Diacyl Glycerol mixed in Substrate/ATP/Metal solution are added at the final concentration of 50  $\mu\text{g/mL}$  and 5  $\mu\text{g/mL}$ , respectively.
- 6) Sodium orthovanadate mixed in Substrate/ATP/Metal solution is added at the final concentration of 25  $\mu\text{M}$ .
- 7) Cantharidin mixed in Substrate/ATP/Metal solution is added at the final concentration of 10  $\mu\text{M}$ .
- 8) PIFtide and Cantharidin mixed in Substrate/ATP/Metal solution are added at the final concentration of 2  $\mu\text{M}$  and 20  $\mu\text{M}$ , respectively.
- 9) TPX2 peptide mixed in Substrate/ATP/Metal solution is added at the final concentration of 200 nM.

**Cascade assay**

| Kinase               | Platform | Substrate      |             | ATP ( $\mu$ M) |       | Metal |      | Positive control |
|----------------------|----------|----------------|-------------|----------------|-------|-------|------|------------------|
|                      |          | Name           | (nM)        | Km             | Assay | Name  | (mM) |                  |
| BRAF                 | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | ZM336372         |
| BRAF[V600E]          | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | ZM336372         |
| COT                  | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| DLK <sup>1)</sup>    | MSA      | MAP2K4, MAP2K7 | 0.5,<br>0.5 | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K1               | MSA      | Erk2           | 2.5         | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K2               | MSA      | Erk2           | 2.5         | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K3               | MSA      | p38a           | 10          | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K4 <sup>1)</sup> | MSA      | JNK2           | 50          | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K5 <sup>1)</sup> | MSA      | Erk5           | 50          | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K6               | MSA      | p38a           | 10          | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP2K7 <sup>1)</sup> | MSA      | JNK2           | 50          | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP3K1               | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP3K2 <sup>1)</sup> | MSA      | MAP2K4, MAP2K7 | 0.5,<br>0.5 | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP3K3               | MSA      | MAP2K6         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP3K4               | MSA      | MAP2K6         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MAP3K5               | MSA      | MAP2K6         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MLK1                 | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MLK2                 | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MLK3                 | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| MOS                  | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | Staurosporine    |
| RAF1                 | MSA      | MAP2K1         | 1           | -              | 1000  | Mg    | 5    | ZM336372         |

1) Reaction time is 5 hours.

### Substrate information of cascade assay

| Kinase      | Substrate      |          |              |      |                      |      |
|-------------|----------------|----------|--------------|------|----------------------|------|
|             | MAP2K          | (nM)     | MAPK         | (nM) | peptide              | (nM) |
| BRAF        | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| BRAF[V600E] | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| COT         | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| DLK         | MAP2K4, MAP2K7 | 0.5, 0.5 | JNK2         | 50   | Modified Erktide     | 1000 |
| MAP2K1      | -              | -        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MAP2K2      | -              | -        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MAP2K3      | -              | -        | p38 $\alpha$ | 10   | Modified Erktide     | 1000 |
| MAP2K4      | -              | -        | JNK2         | 50   | Modified Erktide     | 1000 |
| MAP2K5      | -              | -        | Erk5         | 50   | EGFR-derived peptide | 1000 |
| MAP2K6      | -              | -        | p38 $\alpha$ | 10   | Modified Erktide     | 1000 |
| MAP2K7      | -              | -        | JNK2         | 50   | Modified Erktide     | 1000 |
| MAP3K1      | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MAP3K2      | MAP2K4, MAP2K7 | 0.5, 0.5 | JNK2         | 50   | Modified Erktide     | 1000 |
| MAP3K3      | MAP2K6         | 1        | p38 $\alpha$ | 10   | Modified Erktide     | 1000 |
| MAP3K4      | MAP2K6         | 1        | p38 $\alpha$ | 10   | Modified Erktide     | 1000 |
| MAP3K5      | MAP2K6         | 1        | p38 $\alpha$ | 10   | Modified Erktide     | 1000 |
| MLK1        | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MLK2        | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MLK3        | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| MOS         | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |
| RAF1        | MAP2K1         | 1        | Erk2         | 2.5  | Modified Erktide     | 1000 |

### Data analysis

The readout value of reaction control (complete reaction mixture) is set as a 0% inhibition, and the readout value of background (Enzyme(-)) is set as a 100% inhibition, then the percent inhibition of each test solution is calculated.

IC<sub>50</sub> value is calculated from concentration vs. %Inhibition curves by fitting to a four parameter logistic curve.