CARNA BIOSCIENCES

Custom and Pre-Selected Kinase Profiling
to fit your Budget and Needs!

Kinase Profiling Book

As of January 1, 2013

109 Tyrosine Kinases

201 Serine/Threonine Kinases

3 Lipid Kinases

Carna Biosciences, Inc.

Profiling Assays available from Carna Biosciences, Inc.

As of January 1, 2013

Page	Kinase Name	Assay Platform
3	ABL(ABL1)	MSA
3	ABL(ABL1) [E255K]	MSA
3	ABL(ABL1) [T315I]	MSA
3	ACK(TNK2)	MSA
3	AKT1	MSA
4	AKT2	MSA
4	AKT3	MSA
4	ALK	MSA
4	ALK [F1174L]	MSA
4	ALK [L1196M]	MSA
5	ALK [R1275Q]	MSA
5	EML4-ALK	MSA
5	NPM1-ALK	MSA
5	AMPKα1／β1／γ1(PRKAA1／B1／G1)	MSA
5	AMPKα2／β1／γ1(PRKAA2／B1／G1)	MSA
6	ARG(ABL2)	MSA
6	AurA(AURKA)	MSA
6	AurA(AURKA)／TPX2	MSA
6	AurB(AURKB)／INCENP	MSA
6	AurC(AURKC)	MSA
7	AXL	MSA
7	BLK	MSA
7	BMPR1A	ELISA
7	BMX	MSA
7	BRAF	ELISA
8	BRAF [V600E]	ELISA
8	BRK(PTK6)	MSA
8	BRSK1	MSA
8	BRSK2	MSA
8	BTK	MSA
9	CaMK1α(CAMK1)	MSA
9	CaMK1δ(CAMK1D)	MSA
9	CaMK2α(CAMK2A)	MSA
9	CaMK2β(CAMK2B)	MSA
9	CaMK2γ(CAMK2G)	MSA
10	CaMK2δ(CAMK2D)	MSA
10	CaMK4	MSA
10	CDC2／CycB1	MSA
10	CDC7／ASK	MSA
10	CDK2／CycA2	MSA
11	CDK2／CycE1	MSA
11	CDK3／CycE1	MSA
11	CDK4／CycD3	MSA
11	CDK5／p25	MSA
11	CDK6／CycD3	MSA
12	CDK7／CycH／MAT1	MSA
12	CDK9／CycT1	MSA
12	CGK2(PRKG2)	MSA
12	CHK1(CHEK1)	MSA
12	CHK2(CHEK2)	MSA
13	CK1α(CSNK1A1)	MSA
13	CK1γ1(CSNK1G1)	MSA
13	CK1γ2(CSNK1G2)	MSA
13	CK1γ3(CSNK1G3)	MSA
13	CK1δ(CSNK1D)	MSA
14	CK1ε(CSNK1E)	MSA
14	CK2α1／β(CSNK2A1／B)	MSA
14	CK2α2／β(CSNK2A2／B)	MSA
14	CLK1	MSA
14	CLK2	MSA
15	CLK3	MSA
15	COT(MAP3K8)	ELISA
15	CRIK(CIT)	MSA
15	CSK	MSA
15	DAPK1	MSA
16	DCAMKL2	MSA
16	DDR1	MSA
16	DDR2	MSA
16	DLK(MAP3K12)	ELISA
16	DYRK1A	MSA
17	DYRK1B	MSA
17	DYRK2	MSA
17	DYRK3	MSA
17	EEF2K	MSA
17	EGFR	MSA
18	EGFR [d746-750]	MSA
18	EGFR [d746-750／T790M]	MSA
18	EGFR [L858R]	MSA
18	EGFR [L861Q]	MSA
18	EGFR [T790M]	MSA
19	EGFR [T790M／L858R]	MSA
19	EPHA1	MSA
19	EPHA2	MSA
19	EPHA3	MSA
19	EPHA4	MSA
20	EPHA5	MSA
20	EPHA6	MSA
20	EPHA7	MSA
20	EPHA8	MSA
20	EPHB1	MSA
21	EPHB2	MSA
21	EPHB3	MSA
21	EPHB4	MSA
21	Erk1(MAPK3)	MSA
21	Erk2(MAPK1)	MSA
22	Erk5(MAPK7)	MSA
22	FAK(PTK2)	MSA
22	FER	MSA
22	FES	MSA
22	FGFR1	MSA
23	FGFR1 [V561M]	MSA
23	FGFR2	MSA
23	FGFR3	MSA
23	FGFR3 [K650E]	MSA
23	FGFR3 [K650M]	MSA
24	FGFR4	MSA
24	FGFR4 [N535K]	MSA
24	FGFR4 [V550E]	MSA
24	FGFR4 [V550L]	MSA
24	FGR	MSA
25	FLT1	MSA
25	FLT3	MSA
25	FLT4	MSA

Page	Kinase Name	Assay Platform
25	FMS(CSF1R)	MSA
25	FRK	MSA
26	FYN	MSA
26	GSK3α(GSK3A)	MSA
26	GSK3β(GSK3B)	MSA
26	Haspin(GSG2)	MSA
26	HCK	MSA
27	HER2(ERBB2)	MSA
27	HER4(ERBB4)	MSA
27	HGK(MAP4K4)	MSA
27	HIPK1	MSA
27	HIPK2	MSA
28	HIPK3	MSA
28	HIPK4	MSA
28	IGF1R	MSA
28	IKKα(CHUK)	IMAP
28	IKKβ(IKBKB)	MSA
29	IKKε(IKBKE)	MSA
29	INSR	MSA
29	IRAK1	IMAP
29	IRAK4	MSA
29	IRR(INSRR)	MSA
30	ITK	MSA
30	JAK1	MSA
30	JAK2	MSA
30	JAK3	MSA
30	JNK1(MAPK8)	MSA
31	JNK2(MAPK9)	MSA
31	JNK3(MAPK10)	MSA
31	KDR	MSA
31	KIT	MSA
31	KIT [D816V]	MSA
32	KIT [T670I]	MSA
32	KIT [V560G]	MSA
32	KIT [V654A]	MSA
32	LATS2	MSA
32	LCK	MSA
33	LIMK1	ELISA
33	LKB1(STK11)／MO25α／STRADα	ELISA
33	LOK(STK10)	MSA
33	LTK	MSA
33	LYNa	MSA
34	LYNb	MSA
34	MAP2K1	ELISA
34	MAP2K2	ELISA
34	MAP2K3	ELISA
34	MAP2K4	ELISA
35	MAP2K5	ELISA
35	MAP2K6	ELISA
35	MAP2K7	ELISA
35	MAP3K1	ELISA
35	MAP3K2	ELISA
36	MAP3K3	ELISA
36	MAP3K4	ELISA
36	MAP3K5	ELISA
36	MAP4K2	MSA
36	MAPKAPK2	MSA
37	MAPKAPK3	MSA
37	MAPKAPK5	MSA
37	MARK1	MSA
37	MARK2	MSA
37	MARK3	MSA
38	MARK4	MSA
38	MELK	MSA
38	MER(MERTK)	MSA
38	MET	MSA
38	MET [Y1235D]	MSA
39	MGC42105	MSA
39	MINK(MINK1)	MSA
39	MLK1(MAP3K9)	ELISA
39	MLK2(MAP3K10)	ELISA
39	MLK3(MAP3K11)	ELISA
40	MNK1(MKNK1)	MSA
40	MNK2(MKNK2)	MSA
40	MOS	ELISA
40	MRCKα(CDC42BPA)	MSA
40	MRCKβ(CDC42BPB)	MSA
41	MSK1(RPS6KA5)	MSA
41	MSK2(RPS6KA4)	MSA
41	MSSK1(STK23)	MSA
41	MST1(STK4)	MSA
41	MST2(STK3)	MSA
42	MST3(STK24)	MSA
42	MST4	MSA
42	MUSK	MSA
42	NDR1(STK38)	MSA
42	NDR2(STK38L)	MSA
43	NEK1	MSA
43	NEK2	MSA
43	NEK4	MSA
43	NEK6	MSA
43	NEK7	MSA
44	NEK9	MSA
44	NuaK1	MSA
44	NuaK2	MSA
44	p38α(MAPK14)	MSA
44	p38β(MAPK11)	MSA
45	p38γ(MAPK12)	MSA
45	p38δ(MAPK13)	MSA
45	p70S6K(RPS6KB1)	MSA
45	p70S6Kβ(RPS6KB2)	MSA
45	PAK1	MSA
46	PAK2	MSA
46	PAK3	MSA
46	PAK4	MSA
46	PAK5(PAK7)	MSA
46	PAK6	MSA
47	PASK	MSA
47	PBK	MSA
47	PDGFRα(PDGFRA)	MSA
47	PDGFRα(PDGFRA) [T674I]	MSA
47	PDGFRα(PDGFRA) [V561D]	MSA
48	PDGFRβ(PDGFRB)	MSA

Page	Kinase Name	Assay Platform
48	PDHK2(PDK2)	MSA
48	PDHK4(PDK4)	MSA
48	PDK1(PDPK1)	MSA
48	PEK(EIF2AK3)	IMAP
49	PGK(PRKG1)	MSA
49	PHKG1	MSA
49	PHKG2	MSA
49	PIK3CA／PIK3R1	MSA
49	PIM1	MSA
50	PIM2	MSA
50	PIM3	MSA
50	PKACα(PRKACA)	MSA
50	PKACβ(PRKACB)	MSA
50	PKACγ(PRKACG)	MSA
51	PKCα(PRKCA)	MSA
51	PKCβ1(PRKCB1)	MSA
51	PKCβ2(PRKCB2)	MSA
51	PKCγ(PRKCG)	MSA
51	PKCδ(PRKCD)	MSA
52	PKCε(PRKCE)	MSA
52	PKCζ(PRKCZ)	MSA
52	PKCη(PRKCH)	MSA
52	PKCθ(PRKCQ)	MSA
52	PKCι(PRKCI)	MSA
53	PKD1(PRKD1)	MSA
53	PKD2(PRKD2)	MSA
53	PKD3(PRKD3)	MSA
53	PKN1	IMAP
53	PKR(EIF2AK2)	IMAP
54	PLK1	MSA
54	PLK2	IMAP
54	PLK3	MSA
54	PLK4	ELISA
54	PRKX	MSA
55	PYK2(PTK2B)	MSA
55	QIK(SNF1LK2)	MSA
55	RAF1	ELISA
55	RET	MSA
55	RET [G691S]	MSA
56	RET [M918T]	MSA
56	RET [S891A]	MSA
56	RET [Y791F]	MSA
56	ROCK1	MSA
56	ROCK2	MSA
57	RON(MST1R)	MSA
57	ROS(ROS1)	MSA
57	RSK1(RPS6KA1)	MSA
57	RSK2(RPS6KA3)	MSA
57	RSK3(RPS6KA2)	MSA
58	RSK4(RPS6KA6)	MSA
58	SGK	MSA
58	SGK2	MSA
58	SGK3(SGKL)	MSA
58	SIK(SNF1LK)	MSA
59	skMLCK(MYLK2)	MSA
59	SLK	MSA
59	SPHK1	MSA
59	SPHK2	MSA
59	SRC	MSA
60	SRM(SRMS)	MSA
60	SRPK1	IMAP
60	SRPK2	MSA
60	SYK	MSA
60	TAK1-TAB1(MAP3K7)	ELISA
61	TAOK2	MSA
61	TBK1	MSA
61	TEC	MSA
61	TIE2(TEK)	MSA
61	TNIK	MSA
62	TNK1	MSA
62	TRKA(NTRK1)	MSA
62	TRKB(NTRK2)	MSA
62	TRKC(NTRK3)	MSA
62	TSSK1	MSA
63	TSSK2	MSA
63	TSSK3	MSA
63	TTK	ELISA
63	TXK	MSA
63	TYK2	MSA
64	TYRO3	MSA
64	WEE1	ELISA
64	WNK1	MSA
64	WNK2	MSA
64	WNK3	MSA
65	YES(YES1)	MSA
65	YES(YES1) [T348I]	MSA
65	ZAP70	MSA

<< Cascade Assay >>

Page	Kinase Name	Assay Platform
66	BRAF	MSA
66	BRAF [V600E]	MSA
66	COT(MAP3K8)	MSA
66	DLK(MAP3K12)	MSA
66	MAP2K1	MSA
67	MAP2K2	MSA
67	MAP2K3	MSA
67	MAP2K4	MSA
67	MAP2K5	MSA
67	MAP2K6	MSA
68	MAP2K7	MSA
68	MAP3K1	MSA
68	MAP3K2	MSA
68	MAP3K3	MSA
68	MAP3K4	MSA
69	MAP3K5	MSA
69	MLK1(MAP3K9)	MSA
69	MLK2(MAP3K10)	MSA
69	MLK3(MAP3K11)	MSA
69	MOS	MSA
70	RAF1	MSA
70	TAK1-TAB1(MAP3K7)	MSA

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 (μM) Kmapp / Bin	: 16 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 75
IC50 at 1 mM ATP (nM)	: 1300

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 (μM) Kmapp / Bin	: 17 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 140
IC50 at 1 mM ATP (nM)	: 4500

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 (μM) Kmapp / Bin	: 4 / 5
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 6.4
IC50 at 1 mM ATP (nM)	: 890

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 (μM) Kmapp / Bin	: 97 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 3.2
IC50 at 1 mM ATP (nM)	: 3.8

AKT1

Product code 01-101

Human AKT1, catalytic domain [104-480(end) amino acids of accession number NP_005154.1] was expressed as N-terminal GST-fusion protein (70 kDa) using baculovirus expression system. GST-AKT1 was purified by using glutathione sepharose chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: Crosstide
ATP (μM) Kmapp / Bin	: 31 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.1
IC50 at 1 mM ATP (nM)	: 22

AKT2

Product code 01-102

Human AKT2, catalytic domain [120-481(end) amino acids of accession number NP_001617.1] was expressed as N-terminal GST-fusion protein (69 kDa) using baculovirus expression system. GST-AKT2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Crosstide
ATP (µM) Kmapp / Bin	:	110 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	5.2
IC50 at 1 mM ATP (nM)	:	n.a.

AKT3

Product code 01-103

Human AKT3, catalytic domain [108-479(end) amino acids of accession number NP_005456.1] was expressed as N-terminal GST-fusion protein (70 kDa) using baculovirus expression system. GST-AKT3 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Crosstide
ATP (µM) Kmapp / Bin	:	54 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.2
IC50 at 1 mM ATP (nM)	:	n.a.

ALK

Product code 08-518

Human ALK , cytoplasmic domain [1058-1620(end) amino acids of accession number BAG10812.1] 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 (µM) Kmapp / Bin	:	57 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.5
IC50 at 1 mM ATP (nM)	:	15

ALK [F1174L]

Product code 08-519

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and F1174L of accession number BAG10812.1] 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 (µM) Kmapp / Bin	:	49 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.4
IC50 at 1 mM ATP (nM)	:	21

ALK [L1196M]

Product code 08-529

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and L1196M of accession number BAG10812.1] 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 (µM) Kmapp / Bin	:	63 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.66
IC50 at 1 mM ATP (nM)	:	4.3

ALK [R1275Q]

Product code 08-520

Human ALK , cytoplasmic domain [1058-1620(end) amino acids and R1275Q of accession number BAG10812.1] 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 (μM) Kmapp / Bin	:	84 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.3
IC50 at 1 mM ATP (nM)	:	16

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 (μM) Kmapp / Bin	:	43 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.9
IC50 at 1 mM ATP (nM)	:	16

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 (μM) Kmapp / Bin	:	57 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.4
IC50 at 1 mM ATP (nM)	:	14

AMPKα1／β1／γ1(PRKAA1／B1／G1)

Product code 02-113

Full-length human AMPKα1 [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-AMPKα1/β1/γ1 was purified by using glutathione sepharose chromatography and activated with His-tagged CaMKK1. Activated GST-AMPKα1/β1/γ1 was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	SAMS peptide
ATP (μM) Kmapp / Bin	:	130 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.41
IC50 at 1 mM ATP (nM)	:	0.87

AMPKα2／β1／γ1(PRKAA2／B1／G1)

Product code 02-114

Full-length human AMPKα2 [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-AMPKα2/β1/γ1 was purified by using glutathione sepharose chromatography and activated with His-tagged CaMKK1. Activated GST-AMPKα2/β1/γ1 was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	SAMS peptide
ATP (μM) Kmapp / Bin	:	100 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.79
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	24 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	27
IC50 at 1 mM ATP (nM)	:	400

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 (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.8
IC50 at 1 mM ATP (nM)	:	17

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 (μM) Kmapp / Bin	:	1.7 / 2
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.2
IC50 at 1 mM ATP (nM)	:	n.a.

AurB(AURKB)／INCENP

Product code 05-102

Full-length human AurB [1-344(end) amino acids of accession number Q96GD4] was co-expressed as N-terminal GST-fusion protein (66 kDa) with His-tagged INCENP(INBOX) [803-918(end) amino acids of accession number AAU04398.1] using baculovirus expression system. GST-AurB was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Kemptide
ATP (μM) Kmapp / Bin	:	16 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	7.1
IC50 at 1 mM ATP (nM)	:	62

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 (μM) Kmapp / Bin	:	24 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.7
IC50 at 1 mM ATP (nM)	:	18

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 (µM) Kmapp / Bin	:	32 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.76
IC50 at 1 mM ATP (nM)	:	7.9

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 (µM) Kmapp / Bin	:	62 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.6
IC50 at 1 mM ATP (nM)	:	17

BMPR1A

Product code 09-137

Catalytic domain of constitutive active human BMPR1A [Q233D] derived from wild type BMPR1A [187-532(end) amino acids of accession number NP_004320.2] with N-terminal GST tag was co-expressed with BMPR2 [174-1038(end) amino acids of accession number NP_001195.2] using baculovirus expression system. GST-BMPR1A (66 kDa) was purified by using glutathione sepharose chromatography.

Assay platform	:	ELISA
Substrate	:	Smad1
ATP (µM) Kmapp / Bin	:	19 / 20
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	40
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	75 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	4.9
IC50 at 1 mM ATP (nM)	:	45

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	:	ELISA
Substrate	:	MAP2K1
ATP (µM) Kmapp / Bin	:	0.061 / 0.1
Metal	:	Mg
Reference compound	:	ZM336372
IC50 at ATP Bin (nM)	:	52
IC50 at 1 mM ATP (nM)	:	n.a.

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	:	ELISA
Substrate	:	MAP2K1
ATP (µM) Kmapp / Bin	:	3.2 / 5
Metal	:	Mg
Reference compound	:	ZM336372
IC50 at ATP Bin (nM)	:	100
IC50 at 1 mM ATP (nM)	:	n.a.

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 (73 kDa) using baculovirus expression system. GST-BRK was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Blk/Lyntide
ATP (µM) Kmapp / Bin	:	250 / 250
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	260
IC50 at 1 mM ATP (nM)	:	390

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 (µM) Kmapp / Bin	:	30 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.27
IC50 at 1 mM ATP (nM)	:	0.57

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 (µM) Kmapp / Bin	:	31 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.31
IC50 at 1 mM ATP (nM)	:	n.a.

BTK

Product code 08-080

Full-length human BTK [2-659(end) amino acids of accession number NP_000052.1] was expressed as N-terminal His-tagged protein (79 kDa) using baculovirus expression system. His-tagged BTK was purified by using Ni-NTA affinity chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (µM) Kmapp / Bin	:	72 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	14
IC50 at 1 mM ATP (nM)	:	110

CaMK1α(CAMK1)

Product code 02-104

Full-length human CaMK1α [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-CaMK1α was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	750 / 1000
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	16
IC50 at 1 mM ATP (nM)	:	16

CaMK1δ(CAMK1D)

Product code 02-106

Full-length human CaMK1δ[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-CaMK1δ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Synapsin peptide
ATP (μM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.5
IC50 at 1 mM ATP (nM)	:	n.a.

CaMK2α(CAMK2A)

Product code 02-109

Full-length human CaMK2α [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-CaMK2α was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	33 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.43
IC50 at 1 mM ATP (nM)	:	n.a.

CaMK2β(CAMK2B)

Product code 02-110

Full-length human CaMK2β [1-503 amino acids of accession number NP_742078.1(iso5)] was expressed as N-terminal GST-fusion protein (83 kDa) using baculovirus expression system. GST-CaMK2β was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	19 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.54
IC50 at 1 mM ATP (nM)	:	n.a.

CaMK2γ(CAMK2G)

Product code 02-112

Full-length human CaMK2γ[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-CaMK2γ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	23 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.24
IC50 at 1 mM ATP (nM)	:	n.a.

CaMK2δ(CAMK2D)

Product code 02-111

Full-length human CaMK2δ [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-CaMK2δ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	6.3 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.26
IC50 at 1 mM ATP (nM)	:	n.a.

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 (78 kDa) using baculovirus expression system. GST-CaMK4 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (μM) Kmapp / Bin	:	20 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	140
IC50 at 1 mM ATP (nM)	:	1000

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 (μM) Kmapp / Bin	:	34 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.1
IC50 at 1 mM ATP (nM)	:	32

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 (μM) Kmapp / Bin	:	2.8 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	16
IC50 at 1 mM ATP (nM)	:	850

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 (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.36
IC50 at 1 mM ATP (nM)	:	7.1

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 (μM) Kmapp / Bin	:	130 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.8
IC50 at 1 mM ATP (nM)	:	10

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 (μM) Kmapp / Bin	:	1000 / 1000
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.4
IC50 at 1 mM ATP (nM)	:	3.4

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 and activated with His-tagged CDK7. Activated GST-CDK4/CycD3 was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	DYRKtide-F
ATP (μM) Kmapp / Bin	:	200 / 200
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	13
IC50 at 1 mM ATP (nM)	:	52

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 (μM) Kmapp / Bin	:	10 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.5
IC50 at 1 mM ATP (nM)	:	86

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 (μM) Kmapp / Bin	:	330 / 300
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	42
IC50 at 1 mM ATP (nM)	:	110

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CTD3 peptide
ATP (μM) Kmapp / Bin	:	32 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	17
IC50 at 1 mM ATP (nM)	:	120

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 and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CDK9 substrate
ATP (μM) Kmapp / Bin	:	9.4 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	5.2
IC50 at 1 mM ATP (nM)	:	130

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 (μM) Kmapp / Bin	:	24 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.88
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	50 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.24
IC50 at 1 mM ATP (nM)	:	1.1

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 (μM) Kmapp / Bin	:	51 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	11
IC50 at 1 mM ATP (nM)	:	25

CK1α(CSNK1A1)

Product code 03-101

Full-length human CK1α [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-CK1α was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	4.1 / 5
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	150
IC50 at 1 mM ATP (nM)	:	>10000

CK1γ1(CSNK1G1)

Product code 03-105

Full-length human CK1γ1 [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-CK1γ1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	6.3 / 5
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	1300
IC50 at 1 mM ATP (nM)	:	n.a.

CK1γ2(CSNK1G2)

Product code 03-106

Full-length human CK1γ2 [1-415(end) amino acids of accession number NP_001310.3] was expressed as N-terminal GST-fusion protein (74 kDa) using baculovirus expression system. GST-CK1γ2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	10 / 10
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	510
IC50 at 1 mM ATP (nM)	:	n.a.

CK1γ3(CSNK1G3)

Product code 03-107

Full-length human CK1γ3 [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-CK1γ3 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	3.2 / 5
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	920
IC50 at 1 mM ATP (nM)	:	n.a.

CK1δ(CSNK1D)

Product code 03-103

Human CK1δ, 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-CK1δ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	7.7 / 10
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	25
IC50 at 1 mM ATP (nM)	:	n.a.

CK1ε(CSNK1E)

Product code 03-104

Human CK1ε, 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-CK1ε was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CKtide
ATP (μM) Kmapp / Bin	:	16 / 25
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	200
IC50 at 1 mM ATP (nM)	:	5800

CK2α1／β(CSNK2A1／B)

Product code 05-184

Full-length human CK2α1 [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 CK2β [1-215 amino acids of accession number NP_001311.3] using baculovirus expression system. GST-CK2α1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CK2tide
ATP (μM) Kmapp / Bin	:	2.9 / 5
Metal	:	Mg
Reference compound	:	TBB
IC50 at ATP Bin (nM)	:	42
IC50 at 1 mM ATP (nM)	:	4800

CK2α2／β(CSNK2A2／B)

Product code 05-185

Full-length human CK2α2 [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 CK2β [1-215 amino acids of accession number NP_001311.3] using baculovirus expression system. GST-CK2α2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CK2tide
ATP (μM) Kmapp / 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 (μM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.2
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	140 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	4.6
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	: 75 / 75
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 820
IC50 at 1 mM ATP (nM)	: n.a.

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 (45 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform	: ELISA
Substrate	: MAP2K1 peptide
ATP (µM) Kmapp / Bin	: 7.3 / 10
Metal	: Mn
Reference compound	: K252b
IC50 at ATP Bin (nM)	: 4500
IC50 at 1 mM ATP (nM)	: n.a.

CRIK(CIT)

Product code 01-104

Human citron kinase (CRIK), 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-CRIK was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: Histone H3 peptide
ATP (µM) Kmapp / Bin	: 7.8 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 31
IC50 at 1 mM ATP (nM)	: n.a.

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 (µM) Kmapp / Bin	: 4.8 / 5
Metal	: Mg+Mn
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 53
IC50 at 1 mM ATP (nM)	: 1500

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 (µM) Kmapp / Bin	: 1.1 / 1
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.8
IC50 at 1 mM ATP (nM)	: 490

DCAMKL2

Product code 02-140

Full-length human DCAMKL2 [1-695(end) amino acids of accession number NP_689832.1] 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 (μM) Kmapp / Bin	: 120 / 150
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 22
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 94 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 6.4
IC50 at 1 mM ATP (nM)	: 4.6

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 (μM) Kmapp / Bin	: 38 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.2
IC50 at 1 mM ATP (nM)	: 0.77

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 and gel filtration chromatography.

Assay platform	: ELISA
Substrate	: MAP2K7
ATP (μM) Kmapp / Bin	: 18 / 20
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 180
IC50 at 1 mM ATP (nM)	: n.a.

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 and gel filtration chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: DYRKtide-F
ATP (μM) Kmapp / Bin	: 16 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 4.6
IC50 at 1 mM ATP (nM)	: n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	DYRKtide-F
ATP (μM) Kmapp / Bin	:	59 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.2
IC50 at 1 mM ATP (nM)	:	32

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 (μM) Kmapp / Bin	:	7.7 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	130
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	6.8 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	17
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	12 / 10
Metal	:	Mg
Reference compound	:	NH125
IC50 at ATP Bin (nM)	:	3800
IC50 at 1 mM ATP (nM)	:	n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	2.7 / 5
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	31
IC50 at 1 mM ATP (nM)	:	4000

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 (89 kDa) using baculovirus expression system. GST-EGFR［d746-750aa］ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	19 / 25
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	13
IC50 at 1 mM ATP (nM)	:	93

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 (μM) Kmapp / 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

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 (μM) Kmapp / Bin	:	9.8 / 10
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	11
IC50 at 1 mM ATP (nM)	:	360

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 (μM) Kmapp / Bin	:	7.5 / 10
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	31
IC50 at 1 mM ATP (nM)	:	2200

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 (μM) Kmapp / Bin	:	0.9 / 1
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.8
IC50 at 1 mM ATP (nM)	:	190

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 (μM) Kmapp / Bin	:	1.9 / 2
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.54
IC50 at 1 mM ATP (nM)	:	56

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 (72 kDa) using baculovirus expression system. GST-EPHA1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Blk/Lyntide
ATP (μM) Kmapp / Bin	:	22 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	20
IC50 at 1 mM ATP (nM)	:	340

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 (μM) Kmapp / Bin	:	67 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	98
IC50 at 1 mM ATP (nM)	:	530

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 (73 kDa) using baculovirus expression system. GST-EPHA3 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Blk/Lyntide
ATP (μM) Kmapp / Bin	:	170 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	17
IC50 at 1 mM ATP (nM)	:	76

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 (μM) Kmapp / Bin	:	52 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	50
IC50 at 1 mM ATP (nM)	:	330

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 (μM) Kmapp / Bin	: 56 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 34
IC50 at 1 mM ATP (nM)	: 220

EPHA6

Product code 08-125

Human EPHA6, cytoplasmic domain [683-1130(end) amino acids of accession number CAD38242.1] was expressed as N-terminal GST-fusion protein (77 kDa) using baculovirus expression system. GST-EPHA6 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: Blk/Lyntide
ATP (μM) Kmapp / Bin	: 27 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 17
IC50 at 1 mM ATP (nM)	: 60

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 (μM) Kmapp / Bin	: 58 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 48
IC50 at 1 mM ATP (nM)	: 480

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 (μM) Kmapp / Bin	: 69 / 75
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 61
IC50 at 1 mM ATP (nM)	: 240

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 (μM) Kmapp / Bin	: 29 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 53
IC50 at 1 mM ATP (nM)	: 760

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 (µM) Kmapp / Bin	:	86 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	73
IC50 at 1 mM ATP (nM)	:	400

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 (µM) Kmapp / Bin	:	49 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2000
IC50 at 1 mM ATP (nM)	:	>10000

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 (µM) Kmapp / Bin	:	56 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	160
IC50 at 1 mM ATP (nM)	:	1500

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 (µM) Kmapp / Bin	:	34 / 50
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	870
IC50 at 1 mM ATP (nM)	:	>10000

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 (µM) Kmapp / Bin	:	33 / 50
Metal	:	Mg
Reference compound	:	5-Iodotubercidin
IC50 at ATP Bin (nM)	:	1200
IC50 at 1 mM ATP (nM)	:	>10000

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 (73 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 glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	EGFR-derived peptide
ATP (μM) Kmapp / Bin	:	450 / 1000
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	280
IC50 at 1 mM ATP (nM)	:	280

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 (μM) Kmapp / Bin	:	25 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	21
IC50 at 1 mM ATP (nM)	:	230

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	26 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.0
IC50 at 1 mM ATP (nM)	:	12

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 (μM) Kmapp / Bin	:	43 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.9
IC50 at 1 mM ATP (nM)	:	25

FGFR1

Product code 08-133

Human FGFR1, cytoplasmic domain [396-820(end) amino acids of accession number NP_056934.2] 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 (μM) Kmapp / Bin	:	89 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.3
IC50 at 1 mM ATP (nM)	:	12

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 (µM) Kmapp / Bin	:	33 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.14
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	66 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.74
IC50 at 1 mM ATP (nM)	:	5.4

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 (µM) Kmapp / Bin	:	43 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.6
IC50 at 1 mM ATP (nM)	:	15

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 (µM) Kmapp / Bin	:	41 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	14

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 (µM) Kmapp / Bin	:	17 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.68
IC50 at 1 mM ATP (nM)	:	17

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 (66 kDa) using baculovirus expression system. GST-FGFR4 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	230 / 250
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	43
IC50 at 1 mM ATP (nM)	:	120

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 (66 kDa) using baculovirus expression system. GST-FGFR4[N535K] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	30 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	160
IC50 at 1 mM ATP (nM)	:	1200

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 (66 kDa) using baculovirus expression system. GST-FGFR4[V550E] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	210 / 200
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	370
IC50 at 1 mM ATP (nM)	:	1300

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 (66 kDa) using baculovirus expression system. GST-FGFR4[V550L] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	160 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	10
IC50 at 1 mM ATP (nM)	:	44

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 (µM) Kmapp / Bin	:	34 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.3
IC50 at 1 mM ATP (nM)	:	16

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 (91 kDa) using baculovirus expression system. GST-FLT1 was purified by using glutathione sepharose chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: CSKtide
ATP (μM) Kmapp / Bin	: 140 / 150
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.4
IC50 at 1 mM ATP (nM)	: 4.7

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 and anion exchange chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: Srctide
ATP (μM) Kmapp / Bin	: 94 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.20
IC50 at 1 mM ATP (nM)	: 0.34

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 (μM) Kmapp / Bin	: 72 / 75
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.66
IC50 at 1 mM ATP (nM)	: 2.4

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 (μM) Kmapp / Bin	: 26 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.47
IC50 at 1 mM ATP (nM)	: 1.2

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 (μM) Kmapp / Bin	: 62 / 75
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 3.4
IC50 at 1 mM ATP (nM)	: 40

FYN

Product code 08-068

Full-length human FYN [1-537(end) amino acids of accession number NP_002028.1] was expressed as N-terminal His-tagged protein (64 kDa) using baculovirus expression system. His-tagged FYN was purified by using Ni-NTA affinity chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	50 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.0
IC50 at 1 mM ATP (nM)	:	31

GSK3α(GSK3A)

Product code 04-140

Full-length human GSK3α [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-GSK3α was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CREBtide-p
ATP (μM) Kmapp / Bin	:	12 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	8.0
IC50 at 1 mM ATP (nM)	:	180

GSK3β(GSK3B)

Product code 04-141

Full-length human GSK3β [1-420(end) amino acids of accession number P49841] was expressed as N-terminal GST-fusion protein (73 kDa) using baculovirus expression system. GST-GSK3β was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CREBtide-p
ATP (μM) Kmapp / Bin	:	9.1 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	9.2
IC50 at 1 mM ATP (nM)	:	240

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 (μM) Kmapp / Bin	:	140 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	5.8
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.1
IC50 at 1 mM ATP (nM)	:	22

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 (μM) Kmapp / Bin	:	9.4 / 10
Metal	:	Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	86
IC50 at 1 mM ATP (nM)	:	>10000

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 (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	7.1
IC50 at 1 mM ATP (nM)	:	240

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 (65 kDa) using baculovirus expression system. GST-HGK was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Moesin-derived peptide
ATP (μM) Kmapp / Bin	:	9.4 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.50
IC50 at 1 mM ATP (nM)	:	11

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 (μM) Kmapp / Bin	:	4.4 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	570
IC50 at 1 mM ATP (nM)	:	n.a.

HIPK2

Product code 04-136

Full-length human HIPK2 [1-1198(end) amino acids of accession number Q9H2X6] 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 (μM) Kmapp / Bin	:	5.9 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	170
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	7.3 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	120
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	7 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	71
IC50 at 1 mM ATP (nM)	:	n.a.

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 (74 kDa) using baculovirus expression system. GST-IGF1R was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	IRS1
ATP (μM) Kmapp / Bin	:	63 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	17
IC50 at 1 mM ATP (nM)	:	150

IKKα(CHUK)

Product code 05-112

Full-length human IKKα [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-IKKα was purified by using glutathione sepharose chromatography.

Assay platform	:	IMAP
Substrate	:	IκBα peptide
ATP (μM) Kmapp / Bin	:	41 / 40
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	310
IC50 at 1 mM ATP (nM)	:	n.a.

IKKβ(IKBKB)

Product code 05-084

Truncated human IKKβ[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 IKKβ was purified by using Ni-NTA affinity chromatography and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified IκBα-derived peptide
ATP (μM) Kmapp / Bin	:	16 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	260
IC50 at 1 mM ATP (nM)	:	7500

IKKε(IKBKE)

Product code 05-114

Full-length human IKKε [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-IKKε was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	IκBα peptide
ATP (μM) Kmapp / Bin	:	9.5 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.7
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	58 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	7.2
IC50 at 1 mM ATP (nM)	:	100

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 using baculovirus expression system. GST-IRAK1 was purified by using glutathione sepharose chromatography.

Assay platform	:	IMAP
Substrate	:	SRPKtide
ATP (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	54
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	917 / 1000
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	6.9
IC50 at 1 mM ATP (nM)	:	6.9

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 (μM) Kmapp / Bin	:	64 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	15
IC50 at 1 mM ATP (nM)	:	98

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	6.1 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.2
IC50 at 1 mM ATP (nM)	:	200

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 (μM) Kmapp / Bin	:	68 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.71
IC50 at 1 mM ATP (nM)	:	5.9

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 anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	13 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.22
IC50 at 1 mM ATP (nM)	:	6.0

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 (μM) Kmapp / Bin	:	3.5 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.50
IC50 at 1 mM ATP (nM)	:	25

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 (μM) Kmapp / Bin	:	29 / 100
Metal	:	Mg
Reference compound	:	JNK Inhibitor II
IC50 at ATP Bin (nM)	:	1500
IC50 at 1 mM ATP (nM)	:	>10000

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 glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified Erktide
ATP (μM) Kmapp / Bin	:	21 / 50
Metal	:	Mg
Reference compound	:	JNK Inhibitor II
IC50 at ATP Bin (nM)	:	350
IC50 at 1 mM ATP (nM)	:	7800

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 (μM) Kmapp / Bin	:	6 / 25
Metal	:	Mg
Reference compound	:	JNK Inhibitor II
IC50 at ATP Bin (nM)	:	300
IC50 at 1 mM ATP (nM)	:	>10000

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (μM) Kmapp / Bin	:	74 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.6
IC50 at 1 mM ATP (nM)	:	18

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 (μM) Kmapp / Bin	:	370 / 400
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	2.0

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 (μM) Kmapp / Bin	:	14 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.18
IC50 at 1 mM ATP (nM)	:	2.8

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 (µM) Kmapp / Bin	:	100 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.80
IC50 at 1 mM ATP (nM)	:	3.4

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 (µM) Kmapp / Bin	:	110 / 250
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	1.6

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 (µM) Kmapp / Bin	:	220 / 250
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.7
IC50 at 1 mM ATP (nM)	:	8.2

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 (µM) Kmapp / Bin	:	380 / 400
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.6
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	14 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.5
IC50 at 1 mM ATP (nM)	:	14

LIMK1

Product code 09-105

Truncated human LIMK1 [285-638 amino acids of accession number NP_002305.1] was co-expressed as N-terminal GST-fusion protein (68 kDa) with human His-tagged ROCK2 [1-553 amino acids of accession number NP_004841.2] using baculovirus expression system. GST-LIMK1 was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform	:	ELISA
Substrate	:	Cofilin2
ATP (μM) Kmapp / Bin	:	22 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.50
IC50 at 1 mM ATP (nM)	:	n.a.

LKB1(STK11)／MO25α／STRADα

Product code 02-119

Full-length human LKB1 [1-433(end) amino acids of accession number NP_000446.1] , MO25α [1-341(end) amino acids of accession number NP_057373.1] and STRADα [1-431(end) amino acids of accession number NP_001003787.1] were co-expressed as N-terminal GST-fusion protein (75 kDa) using baculovirus expression system. GST-LKB1 was purified by using glutathione sepharose chromatography.

Assay platform	:	ELISA
Substrate	:	LKBtide
ATP (μM) Kmapp / Bin	:	120 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	54
IC50 at 1 mM ATP (nM)	:	n.a.

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 (113 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Moesin-derived peptide
ATP (μM) Kmapp / Bin	:	100 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.49
IC50 at 1 mM ATP (nM)	:	n.a.

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 and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	49 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.0
IC50 at 1 mM ATP (nM)	:	7.1

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 (μM) Kmapp / Bin	:	14 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.3
IC50 at 1 mM ATP (nM)	:	22

LYNb

Product code 08-172

Full-length human LYNb [1-491(end) amino acids of accession number AAB50019.1] 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 (µM) Kmapp / Bin	:	18 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	21

MAP2K1

Product code 07-041

Full-length human MAP2K1 [1-393(end) amino acids of accession number NP_002746.1] was co-expressed as N-terminal His-tagged protein (47 kDa) with human GST-RAF1 [306-648(end) amino acids and Y340D, Y341D of accession number NP_002871.1] using baculovirus expression system. His-tagged MAP2K1 was purified by using Ni-NTA affinity chromatography and glutathione sepharose chromatography.

Assay platform	:	ELISA
Substrate	:	Erk2
ATP (µM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.43
IC50 at 1 mM ATP (nM)	:	n.a.

MAP2K2

Product code 07-042

Full-length human MAP2K2 [1-400(end) amino acids of accession number NP_109587.1] was co-expressed as N-terminal His-tagged protein (49 kDa) with human GST-RAF1 [306-648(end) amino acids and Y340D, Y341D of accession number NP_002871.1] using baculovirus expression system. His-tagged MAP2K2 was purified by using Ni-NTA affinity chromatography and glutathione sepharose chromatography.

Assay platform	:	ELISA
Substrate	:	Erk2
ATP (µM) Kmapp / Bin	:	13 / 15
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.78
IC50 at 1 mM ATP (nM)	:	n.a.

MAP2K3

Product code 07-048

Full-length human MAP2K3 [1-347(end) amino acids of accession number NP_659731.1] was co-expressed as N-terminal His-tagged protein (42 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K3 was purified by using Ni-NTA affinity chromatography.

Assay platform	:	ELISA
Substrate	:	p38α
ATP (µM) Kmapp / Bin	:	0.36 / 0.5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.42
IC50 at 1 mM ATP (nM)	:	n.a.

MAP2K4

Product code 07-044

Full-length human MAP2K4 [1-399(end) amino acids of accession number NP_003001.1] was co-expressed as N-terminal His-tagged protein (48 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K4 was purified by using Ni-NTA affinity chromatography.

Assay platform	:	ELISA
Substrate	:	JNK1
ATP (µM) Kmapp / Bin	:	1.6 / 2
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	94
IC50 at 1 mM ATP (nM)	:	n.a.

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 and anion exchange chromatography.

Assay platform	: ELISA
Substrate	: Erk5
ATP (µM) Kmapp / Bin	: 1.2 / 1
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.74
IC50 at 1 mM ATP (nM)	: n.a.

MAP2K6

Product code 07-046

Full-length human MAP2K6 [1-334(end) amino acids of accession number NP_002749.2] was co-expressed as N-terminal His-tagged protein (41 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K6 was purified by using Ni-NTA affinity chromatography.

Assay platform	: ELISA
Substrate	: p38α
ATP (µM) Kmapp / Bin	: 0.56 / 0.5
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.19
IC50 at 1 mM ATP (nM)	: n.a.

MAP2K7

Product code 07-047

Full-length human MAP2K7 [1-419(end) amino acids of accession number NP_660186.1] was coexpressed as N-terminal His-tagged protein (51 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K7 was purified by using Ni-NTA affinity chromatography and glutathione sepharose chromatography.

Assay platform	: ELISA
Substrate	: JNK1
ATP (µM) Kmapp / Bin	: 2.7 / 3
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 56
IC50 at 1 mM ATP (nM)	: n.a.

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	: ELISA
Substrate	: MAP2K1
ATP (µM) Kmapp / Bin	: 1.1 / 1
Metal	: Mg
Reference compound	: K252b
IC50 at ATP Bin (nM)	: 400
IC50 at 1 mM ATP (nM)	: n.a.

MAP3K2

Product code 07-004

Human MAP3K2, catalytic domain [337-620(end) amino acids of accession number NP_006600.2] was expressed as N-terminal His-tagged protein (35 kDa) using baculovirus expression system. His-tagged MAP3K2 was purified by using Ni-NTA affinity chromatography.

Assay platform	: ELISA
Substrate	: MAP2K7
ATP (µM) Kmapp / Bin	: 0.83 / 1
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 9.0
IC50 at 1 mM ATP (nM)	: n.a.

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 (97 kDa) using baculovirus expression system. GST-fusion MAP3K3 was purified by using glutathione sepharose chromatography.

Assay platform	: ELISA
Substrate	: MAP2K7
ATP (µM) Kmapp / Bin	: 1.6 / 2
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 9.1
IC50 at 1 mM ATP (nM)	: n.a.

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	: ELISA
Substrate	: MAP2K6
ATP (µM) Kmapp / Bin	: 31 / 30
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 47
IC50 at 1 mM ATP (nM)	: n.a.

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	: ELISA
Substrate	: MAP2K7
ATP (µM) Kmapp / Bin	: 2 / 2
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 14
IC50 at 1 mM ATP (nM)	: n.a.

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 and anion exchange chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: S6K2 peptide
ATP (µM) Kmapp / Bin	: 93 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.3
IC50 at 1 mM ATP (nM)	: n.a.

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 p38β[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.

Assay platform	: Mobility Shift Assay
Substrate	: GS peptide
ATP (µM) Kmapp / Bin	: 3.6 / 5
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 80
IC50 at 1 mM ATP (nM)	: 9300

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 p38β [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 (μM) Kmapp / Bin	:	13 / 10
Metal	:	Mg
Reference compound	:	K252b
IC50 at ATP Bin (nM)	:	4200
IC50 at 1 mM ATP (nM)	:	n.a.

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 p38β [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 (μM) Kmapp / Bin	:	12 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	320
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	8 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.29
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	8.8 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.20
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 (μM) Kmapp / Bin	:	5 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.20
IC50 at 1 mM ATP (nM)	:	n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CHKtide
ATP (µM) Kmapp / Bin	:	12 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.12
IC50 at 1 mM ATP (nM)	:	n.a.

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 (84 kDa) using E. coli expression system. GST-MELK was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	GS peptide
ATP (µM) Kmapp / Bin	:	38 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	36 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.61
IC50 at 1 mM ATP (nM)	:	5.3

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (µM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	44
IC50 at 1 mM ATP (nM)	:	730

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 (µM) Kmapp / Bin	:	71 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	79
IC50 at 1 mM ATP (nM)	:	390

MGC42105

Product code 02-125

Full-length human MGC42105 [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-MGC42105 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CHKtide
ATP (μM) Kmapp / Bin	:	21 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	300
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	36 / 50
Metal	:	Mg
Reference compound	:	K252b
IC50 at ATP Bin (nM)	:	15
IC50 at 1 mM ATP (nM)	:	n.a.

MLK1(MAP3K9)

Product code 09-015

Human MLK1, catalytic domain [110-422 amino acids of accession number NP_149132.2] was expressed as N-terminal His-tagged protein (38kDa) using baculovirus expression system. His-tagged MLK1 was purified by using Ni-NTA affinity chromatography.

Assay platform	:	ELISA
Substrate	:	MAP2K7
ATP (μM) Kmapp / Bin	:	1.7 / 2
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.99
IC50 at 1 mM ATP (nM)	:	n.a.

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	:	ELISA
Substrate	:	MAP2K7
ATP (μM) Kmapp / Bin	:	2.8 / 3
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	6.0
IC50 at 1 mM ATP (nM)	:	n.a.

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	:	ELISA
Substrate	:	MAP2K7
ATP (μM) Kmapp / Bin	:	5 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.50
IC50 at 1 mM ATP (nM)	:	n.a.

MNK1(MKNK1)

Product code 02-145

Full-length human MNK1 [1-424(end) amino acids and T344D of accession number BAA19885.1] 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 (μM) Kmapp / Bin	:	460 / 450
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	21
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	110 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	7.5
IC50 at 1 mM ATP (nM)	:	n.a.

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	:	ELISA
Substrate	:	MAP2K1 [inactive mutant]
ATP (μM) Kmapp / Bin	:	10 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	220
IC50 at 1 mM ATP (nM)	:	n.a.

MRCKα(CDC42BPA)

Product code 01-107

Truncated human MRCKα [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-MRCKα was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	DAPK1tide
ATP (μM) Kmapp / Bin	:	0.45 / 1
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.61
IC50 at 1 mM ATP (nM)	:	n.a.

MRCKβ(CDC42BPB)

Product code 01-108

Truncated human MRCKβ [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-MRCKβ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	DAPK1tide
ATP (μM) Kmapp / Bin	:	0.67 / 1
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.0
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 (μM) Kmapp / 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 (μM) Kmapp / Bin	:	40 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.4
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	56 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	6200
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	50 / 50
Metal	:	Mg
Reference compound	:	K252b
IC50 at ATP Bin (nM)	:	7.3
IC50 at 1 mM ATP (nM)	:	33

MST2(STK3)

Product code 07-117

Full-length human MST2 [1-491(end) amino acids of accession number Q13188] 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 (μM) Kmapp / Bin	:	69 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	12
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	66 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.9
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	76 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	6.3
IC50 at 1 mM ATP (nM)	:	n.a.

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.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (μM) Kmapp / Bin	:	14 / 10
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.1
IC50 at 1 mM ATP (nM)	:	2.6

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 (μM) Kmapp / Bin	:	12 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.8
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	7.6 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.1
IC50 at 1 mM ATP (nM)	:	n.a.

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 and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CDK7 peptide
ATP (µM) Kmapp / Bin	:	64 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	51
IC50 at 1 mM ATP (nM)	:	650

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. 54 kDa) was collected as flow-through fraction from Ni-NTA affinity chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CDK7 peptide
ATP (µM) Kmapp / Bin	:	65 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1600
IC50 at 1 mM ATP (nM)	:	>10000

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 (µM) Kmapp / Bin	:	51 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	120
IC50 at 1 mM ATP (nM)	:	n.a.

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 (62 kDa) using baculovirus expression system. GST-NEK6 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CDK7 peptide
ATP (µM) Kmapp / Bin	:	69 / 75
Metal	:	Mg
Reference compound	:	PKR Inhibitor
IC50 at ATP Bin (nM)	:	19000
IC50 at 1 mM ATP (nM)	:	>10000

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 (µM) Kmapp / Bin	:	40 / 50
Metal	:	Mg
Reference compound	:	PKR Inhibitor
IC50 at ATP Bin (nM)	:	8500
IC50 at 1 mM ATP (nM)	:	>10000

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 (µM) Kmapp / Bin	:	190 / 200
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	150
IC50 at 1 mM ATP (nM)	:	400

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 (µM) Kmapp / Bin	:	59 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.0
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	26 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.2
IC50 at 1 mM ATP (nM)	:	n.a.

p38α(MAPK14)

Product code 04-152

Truncated human p38α [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-p38α was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38α was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified Erktide
ATP (µM) Kmapp / Bin	:	150 / 150
Metal	:	Mg
Reference compound	:	SB202190
IC50 at ATP Bin (nM)	:	6.3
IC50 at 1 mM ATP (nM)	:	22

p38β(MAPK11)

Product code 04-153

Full-length human p38β[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-p38β was purified by using glutathione chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified Erktide
ATP (µM) Kmapp / Bin	:	63 / 75
Metal	:	Mg
Reference compound	:	SB202190
IC50 at ATP Bin (nM)	:	16
IC50 at 1 mM ATP (nM)	:	110

p38γ(MAPK12)

Product code 04-155

Full-length human p38γ [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-p38γ was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38γ was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified Erktide
ATP (μM) Kmapp / Bin	:	13 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	88
IC50 at 1 mM ATP (nM)	:	2800

p38δ(MAPK13)

Product code 04-154

Full-length human p38δ [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-p38δ was purified by using glutathione sepharose chromatography and activated with His-tagged MAP2K6. Activated GST-p38δ was purified using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Modified Erktide
ATP (μM) Kmapp / Bin	:	5.8 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	220
IC50 at 1 mM ATP (nM)	:	>10000

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 (μM) Kmapp / Bin	:	14 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.4
IC50 at 1 mM ATP (nM)	:	9.8

p70S6Kβ(RPS6KB2)

Product code 01-155

Full-length human p70S6Kβ [1-482(end) amino acids of accession number NP_003943.2] was expressed as N-terminal GST-fusion protein (80 kDa) using baculovirus expression system. GST-p70S6Kβ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	S6K2 peptide
ATP (μM) Kmapp / Bin	:	3.3 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.9
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	300 / 300
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	2.3
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	: 81 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 2.5
IC50 at 1 mM ATP (nM)	: 22

PAK3

Product code 07-125

Full-length human PAK3 [1-544(end) amino acids of accession number NP_002569.1] was expressed as N-terminal GST-fusion protein (88 kDa) using baculovirus expression system. GST-PAK3 was purified by using glutathione sepharose chromatography.

This kinase is not available for profiling service, now.

Assay platform	: Mobility Shift Assay
Substrate	: DAPK1tide
ATP (μM) Kmapp / Bin	: 44 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.77
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 2.5 / 5
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 12
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 1.9 / 1
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 2.5
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 3.7 / 5
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.2
IC50 at 1 mM ATP (nM)	: n.a.

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 (µM) Kmapp / Bin	:	9.7 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	13
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	33 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	69
IC50 at 1 mM ATP (nM)	:	720

PDGFRα(PDGFRA)

Product code 08-157

Human PDGFRα, 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-PDGFRα was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	28 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.30
IC50 at 1 mM ATP (nM)	:	1.4

PDGFRα(PDGFRA) [T674I]

Product code 08-503

Human PDGFRα, 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-PDGFRα[T674I] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.12
IC50 at 1 mM ATP (nM)	:	1.1

PDGFRα(PDGFRA) [V561D]

Product code 08-507

Human PDGFRα, 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-PDGFRα[V561D] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	35 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.32
IC50 at 1 mM ATP (nM)	:	1.6

PDGFRβ(PDGFRB)

Product code 08-158

Human PDGFRβ, cytoplasmic domain [557-1106(end) amino acids of accession number NP_002600.1] was expressed as N-terminal GST-fusion protein (89 kDa) using baculovirus expression system. GST-PDGFRβ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (μM) Kmapp / Bin	:	23 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.15
IC50 at 1 mM ATP (nM)	:	0.82

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 (73 kDa) using baculovirus expression system. GST-PDHK2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PDHKtide
ATP (μM) Kmapp / Bin	:	28 / 25
Metal	:	Mg
Reference compound	:	DCA
IC50 at ATP Bin (nM)	:	610000
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	19 / 25
Metal	:	Mg
Reference compound	:	DCA
IC50 at ATP Bin (nM)	:	330000
IC50 at 1 mM ATP (nM)	:	n.a.

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 (90 kDa) using baculovirus expression system. GST-PDK1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	T308tide
ATP (μM) Kmapp / Bin	:	9.6 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	9.2
IC50 at 1 mM ATP (nM)	:	12

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 (μM) Kmapp / Bin	:	13 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3600
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	8.2 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.99
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	71 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.13
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	8.1 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.52
IC50 at 1 mM ATP (nM)	:	n.a.

PIK3CA／PIK3R1

Product code 11-101

Full-length human PIK3CA[1-1068(end) amino acids of accession number NP_006209.2] was co-expressed as N-terminal GST-fusion protein (151 kDa) with PIK3R1[1-724(end) amino acids of accession number NP_852664.1] using baculovirus expression system. GST-PIK3CA/PIK3R1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Phosphatidylinositol
ATP (μM) Kmapp / Bin	:	58 / 50
Metal	:	Mg
Reference compound	:	PI-103
IC50 at ATP Bin (nM)	:	16
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 (μM) Kmapp / Bin	:	640 / 500
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	10
IC50 at 1 mM ATP (nM)	:	20

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 (μM) Kmapp / Bin	:	4 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	14
IC50 at 1 mM ATP (nM)	:	480

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 (μM) Kmapp / Bin	:	130 / 150
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.17
IC50 at 1 mM ATP (nM)	:	n.a.

PKACα(PRKACA)

Product code 01-127

Full-length human PKACα [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-PKACα was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Kemptide
ATP (μM) Kmapp / Bin	:	2.6 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.80
IC50 at 1 mM ATP (nM)	:	86

PKACβ(PRKACB)

Product code 01-128

Full-length human PKACβ [1-351(end) amino acids of accession number NM_002731.2] was expressed as N-terminal GST-fusion protein (68 kDa) using baculovirus expression system. GST-PKACβ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Kemptide
ATP (μM) Kmapp / Bin	:	4.7 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.0
IC50 at 1 mM ATP (nM)	:	n.a.

PKACγ(PRKACG)

Product code 01-129

Full-length human PKACγ [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-PKACγ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Kemptide
ATP (μM) Kmapp / Bin	:	4.5 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.1
IC50 at 1 mM ATP (nM)	:	n.a.

PKCα(PRKCA)

Product code 01-133

Full-length human PKCα [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-PKCα was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	36 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.33
IC50 at 1 mM ATP (nM)	:	3.6

PKCβ1(PRKCB1)

Product code 01-134

Full-length human PKCβ1 [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-PKCβ1 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	79 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.69
IC50 at 1 mM ATP (nM)	:	n.a.

PKCβ2(PRKCB2)

Product code 01-165

Full-length human PKCβ2 [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-PKCβ2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	41 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.36
IC50 at 1 mM ATP (nM)	:	n.a.

PKCγ(PRKCG)

Product code 01-137

Full-length human PKCγ [1-697(end) amino acids of accession number NP_002730.1] was expressed as N-terminal GST-fusion protein (105 kDa) using baculovirus expression system. GST-PKCγ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	74 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.1
IC50 at 1 mM ATP (nM)	:	n.a.

PKCδ(PRKCD)

Product code 01-135

Full-length human PKCδ [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-PKCδ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	26 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.21
IC50 at 1 mM ATP (nM)	:	n.a.

PKCε(PRKCE)

Product code 01-136

Full-length human PKCε [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-PKCε was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	16 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.38
IC50 at 1 mM ATP (nM)	:	5.6

PKCζ(PRKCZ)

Product code 01-141

Full-length human PKCζ [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-PKCζ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	57
IC50 at 1 mM ATP (nM)	:	n.a.

PKCη(PRKCH)

Product code 01-138

Full-length human PKCη [1-683(end) amino acids of accession number NP_006246.2] was expressed as N-terminal GST-fusion protein (94 kDa) using baculovirus expression system. GST-PKCη was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	36 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.92
IC50 at 1 mM ATP (nM)	:	n.a.

PKCθ(PRKCQ)

Product code 01-140

Full-length human PKCθ [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-PKCθ was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	18 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.74
IC50 at 1 mM ATP (nM)	:	n.a.

PKCι(PRKCI)

Product code 01-139

Full-length human PKCι[1-587(end) amino acids of accession number NM_002740] was expressed as N-terminal GST-fusion protein (94 kDa) using baculovirus expression system. GST-PKCι was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	PKC peptide
ATP (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	12
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / 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 (μM) Kmapp / 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 (μM) Kmapp / 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 (μM) Kmapp / 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 (μM) Kmapp / 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 (µM) Kmapp / Bin	:	5.6 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	200
IC50 at 1 mM ATP (nM)	:	5000

PLK2

Product code 05-158

Full-length human PLK2 [1-685(end) amino acids of accession number Q9NYY3] 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 (µM) Kmapp / Bin	:	30 / 30
Metal	:	Mg
Reference compound	:	K252b
IC50 at ATP Bin (nM)	:	530
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	6.8 / 5
Metal	:	Mg
Reference compound	:	K252b
IC50 at ATP Bin (nM)	:	1600
IC50 at 1 mM ATP (nM)	:	>10000

PLK4

Product code 05-160

Full-length human PLK4 [1-970(end) amino acids of accession number BAG36907.1] was expressed as N-terminal GST-fusion protein (136 kDa) using baculovirus expression system. GST-PLK4 was purified by using glutathione sepharose chromatography.

Assay platform	:	ELISA
Substrate	:	MBP
ATP (µM) Kmapp / Bin	:	3.3 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.57
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / 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 (μM) Kmapp / Bin	: 56 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 2.2
IC50 at 1 mM ATP (nM)	: 4.9

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 (μM) Kmapp / Bin	: 42 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 2.4
IC50 at 1 mM ATP (nM)	: n.a.

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 and gel filtration chromatography.

Assay platform	: ELISA
Substrate	: MAP2K1
ATP (μM) Kmapp / Bin	: 0.39 / 0.5
Metal	: Mg
Reference compound	: ZM336372
IC50 at ATP Bin (nM)	: 24
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 7.5 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 2.0
IC50 at 1 mM ATP (nM)	: 20

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 (μM) Kmapp / Bin	: 13 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 1.1
IC50 at 1 mM ATP (nM)	: 24

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 (µM) Kmapp / Bin	:	4.2 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.4
IC50 at 1 mM ATP (nM)	:	81

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 (µM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.44
IC50 at 1 mM ATP (nM)	:	9.6

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 (µM) Kmapp / Bin	:	29 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.5
IC50 at 1 mM ATP (nM)	:	26

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 (µM) Kmapp / Bin	:	3.1 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.6
IC50 at 1 mM ATP (nM)	:	73

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 (90 kDa) using baculovirus expression system. GST-ROCK2 was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	LIMKtide
ATP (µM) Kmapp / Bin	:	7.4 / 5
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.92
IC50 at 1 mM ATP (nM)	:	n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	27 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	37
IC50 at 1 mM ATP (nM)	:	550

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 (μM) Kmapp / Bin	:	37 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.25
IC50 at 1 mM ATP (nM)	:	1.0

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 (μM) Kmapp / Bin	:	21 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.14
IC50 at 1 mM ATP (nM)	:	2.5

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 (μM) Kmapp / Bin	:	14 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.15
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	9.9 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.16
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	20 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.051
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	52 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	4.6
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 (μM) Kmapp / 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 (μM) Kmapp / Bin	:	17 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	42
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	47 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.8
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	820 / 1000
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	51
IC50 at 1 mM ATP (nM)	:	51

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 (μM) Kmapp / Bin	:	36 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.32
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	20 / 25
Metal	:	Mg
Reference compound	:	Non-disclosable
IC50 at ATP Bin (nM)	:	
IC50 at 1 mM ATP (nM)	:	

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 (μM) Kmapp / Bin	:	620 / 600
Metal	:	Mg
Reference compound	:	Non-disclosable
IC50 at ATP Bin (nM)	:	
IC50 at 1 mM ATP (nM)	:	

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 (μM) Kmapp / Bin	:	31 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	3.4
IC50 at 1 mM ATP (nM)	:	24

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 (μM) Kmapp / Bin	: 38 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 290
IC50 at 1 mM ATP (nM)	: 5000

SRPK1

Product code 04-160

Full-length human SRPK1 [1-654(end) amino acids of accession number CAI20544.1] was expressed as N-terminal GST-fusion protein (100 kDa) using E. coli expression system. GST-SRPK1 was purified by using glutathione sepharose chromatography.

Assay platform	: IMAP
Substrate	: SRPKtide
ATP (μM) Kmapp / Bin	: 200 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 85
IC50 at 1 mM ATP (nM)	: n.a.

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 (105 kDa) using baculovirus expression system. GST-SRPK2 was purified by using glutathione sepharose chromatography.

Assay platform	: Mobility Shift Assay
Substrate	: DYRKtide-F
ATP (μM) Kmapp / Bin	: 14 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 600
IC50 at 1 mM ATP (nM)	: n.a.

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 (μM) Kmapp / Bin	: 26 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.84
IC50 at 1 mM ATP (nM)	: 0.63

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	: ELISA
Substrate	: MAP2K7
ATP (μM) Kmapp / Bin	: 10 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 14
IC50 at 1 mM ATP (nM)	: n.a.

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	TAOKtide
ATP (μM) Kmapp / Bin	:	39 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	24
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	21 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.2
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	55 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	20
IC50 at 1 mM ATP (nM)	:	220

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 (μM) Kmapp / Bin	:	94 / 100
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	51
IC50 at 1 mM ATP (nM)	:	190

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 (μM) Kmapp / Bin	:	16 / 25
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.0
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	71 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.55
IC50 at 1 mM ATP (nM)	:	1.7

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 and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (μM) Kmapp / Bin	:	65 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.22
IC50 at 1 mM ATP (nM)	:	0.64

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 (68 kDa) using baculovirus expression system. GST-TRKB was purified by using glutathione sepharose chromatography and gel filtration chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	80 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.48
IC50 at 1 mM ATP (nM)	:	0.55

TRKC(NTRK3)

Product code 08-197

Human TRKC, catalytic 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 (μM) Kmapp / Bin	:	47 / 50
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.32
IC50 at 1 mM ATP (nM)	:	1.0

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 (μM) Kmapp / Bin	:	11 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.19
IC50 at 1 mM ATP (nM)	:	0.95

TSSK2

Product code 02-165

Full-length human TSSK2 [1-358(end) amino acids of accession number Q96PF2] 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 (µM) Kmapp / Bin	: 8.8 / 10
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 4.7
IC50 at 1 mM ATP (nM)	: n.a.

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 (µM) Kmapp / Bin	: 45 / 50
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 12
IC50 at 1 mM ATP (nM)	: n.a.

TTK

Product code 05-169

Full-length humanTTK [1-857(end) amino acids of accession number NP_003309.2] was expressed as N-terminal GST-fusion protein (123 kDa) using baculovirus expression system. GST-TTK was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	: ELISA
Substrate	: Lyn substrate peptide
ATP (µM) Kmapp / Bin	: 0.16 / 0.2
Metal	: Mn
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 380
IC50 at 1 mM ATP (nM)	: n.a.

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 (µM) Kmapp / Bin	: 110 / 100
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 22
IC50 at 1 mM ATP (nM)	: 220

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 (µM) Kmapp / Bin	: 18 / 25
Metal	: Mg
Reference compound	: Staurosporine
IC50 at ATP Bin (nM)	: 0.43
IC50 at 1 mM ATP (nM)	: 7.0

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 and anion exchange chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	CSKtide
ATP (µM) Kmapp / Bin	:	80 / 75
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.57
IC50 at 1 mM ATP (nM)	:	2.9

WEE1

Product code 05-177

Human WEE1, catalytic domain [215-646(end) amino acids of accession number NP_003381.1] was expressed as N-terminal GST-fusion protein (76 kDa) using baculovirus expression system. GST-WEE1 was purified by using glutathione sepharose chromatography and anion exchange chromatography.

Assay platform	:	ELISA
Substrate	:	CDC2 peptide
ATP (µM) Kmapp / Bin	:	7.7 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1900
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	140 / 150
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	>10000
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	48 / 50
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	8500
IC50 at 1 mM ATP (nM)	:	n.a.

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 (µM) Kmapp / Bin	:	48 / 50
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	8500
IC50 at 1 mM ATP (nM)	:	n.a.

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 (μM) Kmapp / Bin	:	13 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.4
IC50 at 1 mM ATP (nM)	:	23

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 (88 kDa) using baculovirus expression system. GST-YES[T348I] was purified by using glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Srctide
ATP (μM) Kmapp / Bin	:	8.5 / 10
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	1.4
IC50 at 1 mM ATP (nM)	:	n.a.

ZAP70

Product code 08-377

Full-length human ZAP70 [1-619(end) amino acids of accession number NP_001070.2] was expressed as N-terminal GST-fusion protein using baculovirus expression system. GST-ZAP70 was purified by using glutathione sepharose chromatography. GST-ZAP70 was cleaved by PreScission protease and GST-free ZAP70 (70 kDa) was collected as flow-through fraction from glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	Blk/Lyntide
ATP (μM) Kmapp / Bin	:	1.7 / 1
Metal	:	Mg+Mn
Reference compound	:	Staurosporine
IC50 at ATP Bin (nM)	:	0.44
IC50 at 1 mM ATP (nM)	:	83

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*

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*

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 (45 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*

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 and gel filtration 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*

MAP2K1

Product code 07-041

Full-length human MAP2K1 [1-393(end) amino acids of accession number NP_002746.1] was co-expressed as N-terminal His-tagged protein (47 kDa) with human GST-RAF1 [306-648(end) amino acids and Y340D, Y341D of accession number NP_002871.1] using baculovirus expression system. His-tagged MAP2K1 was purified by using Ni-NTA affinity chromatography and glutathione sepharose 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*

MAP2K2

Product code 07-042

Full-length human MAP2K2 [1-400(end) amino acids of accession number NP_109587.1] was co-expressed as N-terminal His-tagged protein (49 kDa) with human GST-RAF1 [306-648(end) amino acids and Y340D, Y341D of accession number NP_002871.1] using baculovirus expression system. His-tagged MAP2K2 was purified by using Ni-NTA affinity chromatography and glutathione sepharose 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*

MAP2K3

Product code 07-048

Full-length human MAP2K3 [1-347(end) amino acids of accession number NP_659731.1] was co-expressed as N-terminal His-tagged protein (42 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K3 was purified by using Ni-NTA affinity 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*

MAP2K4

Product code 07-044

Full-length human MAP2K4 [1-399(end) amino acids of accession number NP_003001.1] was co-expressed as N-terminal His-tagged protein (48 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K4 was purified by using Ni-NTA affinity 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*

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 and anion exchange 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*

MAP2K6

Product code 07-046

Full-length human MAP2K6 [1-334(end) amino acids of accession number NP_002749.2] was co-expressed as N-terminal His-tagged protein (41 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K6 was purified by using Ni-NTA affinity 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*

MAP2K7

Product code 07-047

Full-length human MAP2K7 [1-419(end) amino acids of accession number NP_660186.1] was coexpressed as N-terminal His-tagged protein (51 kDa) with human GST-MAP3K3 [1-626(end) amino acids of accession number NP_002392.2] using baculovirus expression system. His-tagged MAP2K7 was purified by using Ni-NTA affinity chromatography and glutathione sepharose chromatography.

Assay platform	:	Mobility Shift Assay
Substrate	:	JNK2 Cascade Assay*
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at 1 mM ATP (nM)	:	630

**JNK2/Modified Erktide*

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*

MAP3K2

Product code 07-004

Human MAP3K2, catalytic domain [337-620(end) amino acids of accession number NP_006600.2] was expressed as N-terminal His-tagged protein (35 kDa) using baculovirus expression system. His-tagged MAP3K2 was purified by using Ni-NTA affinity 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*

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 (97 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/p38α/Modified Erktide*

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/p38α/Modified Erktide*

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/p38α/Modified Erktide*

MLK1(MAP3K9)

Product code 09-015

Human MLK1, catalytic domain [110-422 amino acids of accession number NP_149132.2] was expressed as N-terminal His-tagged protein (38kDa) using baculovirus expression system. His-tagged MLK1 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)	:	11

**MAP2K1/Erk2/Modified Erktide*

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*

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*

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*

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 and gel filtration 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*

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	:	MAP2K4/MAP2K7 Cascade Assay*
Metal	:	Mg
Reference compound	:	Staurosporine
IC50 at 1 mM ATP (nM)	:	340

**(MAP2K4/MAP2K7)/JNK2/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 assay control are prepared similarly.

Assay reagents and procedures

TK-ELISA

1) The 10 μL of 4x compound solution, 10 μL of 4x Substrate/ATP/Metal solution, and 20 μL of 2x kinase solution are prepared with assay buffer (15 mM Tris-HCl, 0.01% Tween-20, 2 mM DTT, pH7.5) and mixed in a well of streptavidine-coated 96 well microplate (Perkin Elmer).
2) The well is incubated for 1 hour at room temperature and then washed 4 times to stop the reaction.
3) The well is blocked with blocking buffer containing 0.1% BSA and then 100 μL of the detection antibody (HRP conjugated PY20; Santa Cruz Biotechnology) solution is added and incubated for 30 minutes.
4) After washing the well, 100 μL of TMB solution (MOSS Inc.) is added and incubated for 5 minutes. To stop the HRP reaction, 100 μL of 0.1 M sulfuric acid is added.
5) The kinase reaction is evaluated by the absorbance at 450 nm of the well.

STK-ELISA

1) The 10 μL of 4x compound solution, 10 μL of 4x Substrate/ATP/Metal solution, and 20 μL of 2x kinase solution are prepared with assay buffer (15 mM Tris-HCl, 0.01% Tween-20, 2 mM DTT, pH7.5) and mixed and incubated in a well of polypropylene 96 well microplate for 0.5 or 1 hour* at room temperature. (*; depend on kinase)
2) 120 μL of 40 mM EDTA solution (pH 7.5) is added to the well, and then 120 μL of the mixture is transferred to the well of ELISA plate (see below table).
3) After 30 minutes incubation, the well is washed 4 times, and blocked with blocking buffer containing 0.1% BSA.
4) 100 μL of the first antibody (see below table) solution is added to the well and incubated for 30 minutes.
5) After 4 times washing of the well, 100 μL of the second antibody (sell below table) solution is added to the well, and incubated for 30 minutes.
6) After washing the well, 100 μL of TMB solution (MOSS Inc.) is added and incubated for 5 minutes. To stop the HRP reaction, 100 μL of 0.1 M sulfuric acid is added.
7) The kinase reaction is evaluated by the absorbance at 450 nm of the well.

IMAP assay

1) The 5 μL of 4x compound solution, 5 μL of 4x Substrate/ATP/Metal solution, and 10 μL of 2x kinase solution are prepared with assay buffer (20 mM HEPES, 0.01% Tween-20, 2 mM DTT, pH7.4) and mixed and incubated in a well of polystyrene 384 well black microplate for 1 hour at room temperature.
2) 60 μL of IMAP binding reagent (IMAP™ Screening Express kit; MDS Analytical Technologies) is added to the well, and incubated for 30 minutes.
3) 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) The 5 μL of 4x compound solution, 5 μL of 4x Substrate/ATP/Metal solution, and 10 μL of 2x kinase solution are prepared with assay buffer (20 mM HEPES, 0.01% Triton X-100, 2 mM DTT, pH7.5) and mixed and incubated in a well of polypropylene 384 well microplate for 1 or 5 hour(s)* at room temperature. (*; depend on kinase)
2) 60 μL of Termination Buffer (QuickScout Screening Assist MSA; Carna Biosciences) is added to the well.
3) The reaction mixture is applied to LabChip™3000 system (Caliper Life Science), and the product and substrate peptide peaks are separated and quantitated.
4) The kinase reaction is evaluated by the product ratio calculated from peak heights of product(P) and substrate(S) peptides (P/(P+S)).

ELISA plate and Antibody

Kinase	ELISA plate and Antibody
BMPR1A	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho Smad1(Ser463/Ser465) antibody (Santa Cruz Biotechnology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
BRAF	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
BRAF [V600E]	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
COT	ELISA plate: Streptavidin coated plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
DLK	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
LIMK1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho-Cofilin 2 (Ser3) (Millipore) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
LKB1	ELISA plate: Streptavidin coated plate (NUNC) 1st Ab: Rabbit phospho-threonine antibody (P-Thr-Polyclonal) (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP2K1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho p44/42 MAPK (Thr202/Tyr204) (E10) monoclonal antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-mouse IgG Ab (Invitrogen)
MAP2K2	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho p44/42 MAPK (Thr202/Tyr204) (E10) monoclonal antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-mouse IgG Ab (Invitrogen)
MAP2K3	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho p38 MAPK (Thr180/Tyr182) (28B10) monoclonal antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-mouse IgG Ab (Invitrogen)
MAP2K4	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho JNK(Thr183/Tyr185, Thr221/Tyr223) rabbit Antibody (Millipore) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP2K5	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho-ERK5(Thr218/Tyr220) antibody (Santa Cruz Biotechnology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP2K6	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho p38 MAPK (Thr180/Tyr182) (28B10) monoclonal antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-mouse IgG Ab (Invitrogen)
MAP2K7	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho JNK(Thr183/Tyr185, Thr221/Tyr223) rabbit Antibody (Millipore) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP3K1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP3K2	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP3K3	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)

Kinase	ELISA plate and Antibody
MAP3K4	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Rabbit polyclonal to MEK3 + MEK6 (phospho S189)(ab4759) (abcam) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MAP3K5	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MLK1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MLK2	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MLK3	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
MOS	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
PLK4	ELISA plate: Streptavidin coated plate (NUNC) 1st Ab: Rabbit phospho-threonine antibody (P-Thr-Polyclonal) (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
RAF1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MEK1/2(Ser217/221) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)
TAK1-TAB1	ELISA plate: Glutathione coated 96 well plate (NUNC) 1st Ab: Anti-phospho MKK7(Ser271/Thr275) antibody (Cell Signaling Technology) 2nd Ab: HRP labeled goat anti-rabbit IgG Ab (Invitrogen)

Reaction conditions

ATP Km bin

Kinase	Platform	Substrate		ATP (μM)		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[1)]	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[F1174L]	MSA	Srctide	1000	49	50	Mg	5	Staurosporine
ALK [L1196M]	MSA	Srctide	1000	63	75	Mg	5	Staurosporine
ALK[R1275Q]	MSA	Srctide	1000	84	100	Mg	5	Staurosporine
EML4-ALK[1)]	MSA	Srctide	1000	43	50	Mg	5	Staurosporine
NPM1-ALK	MSA	Srctide	1000	57	50	Mg	5	Staurosporine
AMPKα1/β1/γ1	MSA	SAMS peptide	1000	130	150	Mg	5	Staurosporine
AMPKα2/β1/γ1	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[10)]	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
BMPR1A	STK-ELISA	Smad1	125	19	20	Mg	5	Staurosporine
BMX	MSA	Srctide	1000	75	75	Mg	5	Staurosporine
BRAF	STK-ELISA	MAP2K1	85	0.061	0.1	Mg	40	ZM336372
BRAF[V600E]	STK-ELISA	MAP2K1	85	3.2	5	Mg	40	ZM336372
BRK[1)]	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	72	75	Mg	5	Staurosporine
CaMK1α[1)3)]	MSA	GS peptide	1000	750	1000	Mg	5	Staurosporine
CaMK1δ[1)3)]	MSA	Synapsin peptide	1000	11	10	Mg	5	Staurosporine
CaMK2α[3)]	MSA	GS peptide	1000	33	50	Mg	5	Staurosporine
CaMK2β[3)]	MSA	GS peptide	1000	19	25	Mg	5	Staurosporine
CaMK2γ[3)]	MSA	GS peptide	1000	23	25	Mg	5	Staurosporine
CaMK2δ[3)]	MSA	GS peptide	1000	6.3	5	Mg	5	Staurosporine
CaMK4[3)]	MSA	GS peptide	1000	20	25	Mg	5	Staurosporine
CDC2/CycB1	MSA	Modified Histone H1	1000	34	50	Mg	5	Staurosporine
CDC7/ASK[1)]	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	132	150	Mg	5	Staurosporine
CDK3/CycE1	MSA	Modified Histone H1	1000	1000	1000	Mg	5	Staurosporine
CDK4/CycD3[1)]	MSA	DYRKtide-F	1000	200	200	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
CDK5/p25	MSA	Modified Histone H1	1000	10	10	Mg	5	Staurosporine
CDK6/CycD3[1)]	MSA	DYRKtide-F	1000	330	300	Mg	5	Staurosporine
CDK7/CycH/MAT1[1)]	MSA	CTD3 peptide	1000	32	50	Mg	5	Staurosporine
CDK9/CycT1[1)]	MSA	CDK9 substrate	1000	9.4	10	Mg	5	Staurosporine
CGK2[4)]	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
CK1α[1)]	MSA	CKtide	1000	4.1	5	Mg	5	5-Iodotubercidin
CK1γ1	MSA	CKtide	1000	6.3	5	Mg	5	5-Iodotubercidin
CK1γ2	MSA	CKtide	1000	10	10	Mg	5	5-Iodotubercidin
CK1γ3	MSA	CKtide	1000	3.2	5	Mg	5	5-Iodotubercidin
CK1δ	MSA	CKtide	1000	7.7	10	Mg	5	5-Iodotubercidin
CK1ε[1)]	MSA	CKtide	1000	16	25	Mg	5	5-Iodotubercidin
CK2α1/β	MSA	CK2tide	1000	2.9	5	Mg	5	TBB
CK2α2/β	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
COT	STK-ELISA	MAP2K1 peptide	250	7.3	10	Mn	10	K252b
CRIK[1)]	MSA	Histone H3 peptide	1000	7.8	10	Mg	5	Staurosporine
CSK[1)]	MSA	Srctide	1000	4.8	5	Mg+Mn	5+1	Staurosporine
DAPK1	MSA	DAPK1tide	1000	1.1	1	Mg	5	Staurosporine
DCAMKL2[1)]	MSA	GS peptide	1000	120	150	Mg	5	Staurosporine
DDR1[1)]	MSA	IRS1	1000	94	100	Mg	5	Staurosporine
DDR2[1)]	MSA	IRS1	1000	38	50	Mg	5	Staurosporine
DLK	STK-ELISA	MAP2K7	72	18	20	Mg	0.5	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[1)3)]	MSA	EEF2Ktide	1000	12	10	Mg	5	NH125
EGFR	MSA	Srctide	1000	2.7	5	Mg+Mn	5+1	Staurosporine
EGFR[d746-750/T790M]	MSA	Srctide	1000	5.4	5	Mg+Mn	5+1	Staurosporine
EGFR[d746-750]	MSA	Srctide	1000	19	25	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/L858R]	MSA	Srctide	1000	1.9	2	Mg+Mn	5+1	Staurosporine
EGFR[T790M]	MSA	Srctide	1000	0.9	1	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
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

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
EPHB4	MSA	Blk/Lyntide	1000	56	50	Mg	5	Staurosporine
Erk1	MSA	Modified Erktide	1000	34	50	Mg	5	5-Iodotubercidin
Erk2	MSA	Modified Erktide	1000	33	50	Mg	5	5-Iodotubercidin
Erk5	MSA	EGFR-derived peptide	1000	450	1000	Mg	5	Staurosporine
FAK[1)]	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
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
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	MSA	Srctide	1000	50	50	Mg	5	Staurosporine
GSK3α	MSA	CREBtide-p	1000	12	10	Mg	5	Staurosporine
GSK3β	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	9.4	10	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
IGF1R	MSA	IRS1	1000	63	75	Mg	5	Staurosporine
IKKα	IMAP	IκBα peptide	100	41	40	Mg	10	Staurosporine
IKKβ	MSA	Modified IκBα-derived peptide	1000	16	25	Mg	5	Staurosporine
IKKε[1)]	MSA	IκBα 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[1)]	MSA	IRAK1 peptide	1000	917	1000	Mg	5	Staurosporine
IRR	MSA	IRS1	1000	64	75	Mg	5	Staurosporine
ITK	MSA	Srctide	1000	6.1	10	Mg	5	Staurosporine
JAK1[1)6)]	MSA	JAK1 substrate peptide	1000	68	75	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
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	JNK Inhibitor II
JNK2	MSA	Modified Erktide	1000	21	50	Mg	5	JNK Inhibitor II
JNK3	MSA	Modified Erktide	1000	6.0	25	Mg	5	JNK Inhibitor II
KDR	MSA	CSKtide	1000	74	75	Mg	5	Staurosporine
KIT[D816V][6)]	MSA	Srctide	1000	14	10	Mg	5	Staurosporine
KIT[T670I][6)]	MSA	Srctide	1000	100	100	Mg	5	Staurosporine
KIT[V560G][6)]	MSA	Srctide	1000	110	250	Mg	5	Staurosporine
KIT[V654A][6)]	MSA	Srctide	1000	220	250	Mg	5	Staurosporine
KIT[6)]	MSA	Srctide	1000	370	400	Mg	5	Staurosporine
LATS2[1)]	MSA	SGKtide	1000	381	400	Mg	5	Staurosporine
LCK	MSA	Srctide	1000	14	10	Mg	5	Staurosporine
LIMK1	STK-ELISA	Cofilin2	250	22	25	Mg	5	Staurosporine
LKB1/MO25α/STRADα	STK-ELISA	LKBtide	250	120	150	Mg	5	Staurosporine
LOK[1)]	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
MAP2K1	STK-ELISA	Erk2	100	11	10	Mg	5	Staurosporine
MAP2K2	STK-ELISA	Erk2	100	13	15	Mg	5	Staurosporine
MAP2K3	STK-ELISA	p38α(9-352)	100	0.36	0.5	Mg	10	Staurosporine
MAP2K4[2)]	STK-ELISA	JNK1	250	1.6	2	Mg	10	Staurosporine
MAP2K5[2)]	STK-ELISA	Erk5	25	1.2	1	Mg	5	Staurosporine
MAP2K6	STK-ELISA	p38α(9-352)	100	0.56	0.5	Mg	10	Staurosporine
MAP2K7[2)]	STK-ELISA	JNK1	250	2.7	3	Mg	10	Staurosporine
MAP3K1	STK-ELISA	MAP2K1	85	1.1	1	Mg	40	K252b
MAP3K2	STK-ELISA	MAP2K7	180	0.83	1	Mg	10	Staurosporine
MAP3K3	STK-ELISA	MAP2K7	180	1.6	2	Mg	10	Staurosporine
MAP3K4	STK-ELISA	MAP2K6	200	31	30	Mg	2.5	Staurosporine
MAP3K5	STK-ELISA	MAP2K7	180	2.0	2	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	K252b
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[1)]	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[Y1235D]	MSA	Srctide	1000	71	75	Mg	5	Staurosporine
MGC42105	MSA	CHKtide	1000	21	25	Mg	5	Staurosporine
MINK[1)]	MSA	Modified Erktide	1000	36	50	Mg	5	K252b
MLK1	STK-ELISA	MAP2K7	180	1.7	2	Mg	5	Staurosporine
MLK2	STK-ELISA	MAP2K7	180	2.8	3	Mg	5	Staurosporine
MLK3	STK-ELISA	MAP2K7	180	5.0	5	Mg	10	Staurosporine
MNK1	MSA	RS peptide	1000	460	450	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
MNK2	MSA	RS peptide	1000	110	100	Mg	5	Staurosporine
MOS	STK-ELISA	MAP2K1 [inactive mutant]	250	10	10	Mg	5	Staurosporine
MRCKα[1)]	MSA	DAPK1tide	1000	0.45	1	Mg	5	Staurosporine
MRCKβ	MSA	DAPK1tide	1000	0.67	1	Mg	5	Staurosporine
MSK1	MSA	Crosstide	1000	13	10	Mg	5	Staurosporine
MSK2[1)]	MSA	Crosstide	1000	40	50	Mg	5	Staurosporine
MSSK1[1)]	MSA	DYRKtide-F	1000	56	50	Mg	5	Staurosporine
MST1[1)11)]	MSA	IRS1	1000	50	50	Mg	5	K252b
MST2[1)7)]	MSA	IRS1	1000	69	75	Mg	5	Staurosporine
MST3[1)]	MSA	Moesin-derived peptide	1000	66	75	Mg	5	Staurosporine
MST4[1)]	MSA	Moesin-derived peptide	1000	76	75	Mg	5	Staurosporine
MUSK[1)]	MSA	CSKtide	1000	14	10	Mg+Mn	5+1	Staurosporine
NDR1[1)]	MSA	SGKtide	1000	12	10	Mg	5	Staurosporine
NDR2[1)]	MSA	SGKtide	1000	7.6	10	Mg	5	Staurosporine
NEK1[1)]	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[1)]	MSA	CDK7 peptide	1000	69	75	Mg	5	PKR Inhibitor
NEK7[1)]	MSA	CDK7 peptide	1000	40	50	Mg	5	PKR Inhibitor
NEK9[1)]	MSA	CDK7 peptide	1000	190	200	Mg	5	Staurosporine
NuaK1	MSA	CHKtide	1000	59	50	Mg	5	Staurosporine
NuaK2	MSA	CHKtide	1000	26	25	Mg	5	Staurosporine
p38α	MSA	Modified Erktide	1000	150	150	Mg	5	SB202190
p38β	MSA	Modified Erktide	1000	63	75	Mg	5	SB202190
p38γ	MSA	Modified Erktide	1000	13	10	Mg	5	Staurosporine
p38δ	MSA	Modified Erktide	1000	5.8	5	Mg	5	Staurosporine
p70S6K	MSA	S6k2 peptide	1000	14	10	Mg	5	Staurosporine
p70S6Kβ	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
PAK3	MSA	DAPK1tide	1000	44	50	Mg	5	Staurosporine
PAK4[1)]	MSA	SGKtide	1000	2.5	5	Mg	5	Staurosporine
PAK5	MSA	DAPK1tide	1000	1.9	1	Mg	5	Staurosporine
PAK6[1)]	MSA	SGKtide	1000	3.7	5	Mg	5	Staurosporine
PASK[1)]	MSA	GS peptide	1000	9.7	10	Mg	5	Staurosporine
PBK[1)]	MSA	Histone H3 peptide	1000	33	50	Mg	5	Staurosporine
PDGFRα	MSA	CSKtide	1000	28	25	Mg	5	Staurosporine
PDGFRα[T674I][1)]	MSA	CSKtide	1000	11	10	Mg	5	Staurosporine
PDGFRα[V561D]	MSA	CSKtide	1000	35	50	Mg	5	Staurosporine
PDGFRβ	MSA	CSKtide	1000	23	25	Mg	5	Staurosporine
PDHK2[1)]	MSA	PDHKtide	1000	28	25	Mg+K	5+3	DCA
PDHK4[1)]	MSA	PDHKtide	1000	19	25	Mg+K	5+25	DCA
PDK1[1)8)]	MSA	T308tide	1000	9.6	10	Mg	5	Staurosporine
PEK	IMAP	SRPKtide	100	13	10	Mg	5	Staurosporine
PGK[1)4)]	MSA	Kemptide	1000	8.2	10	Mg	5	Staurosporine
PHKG1[1)]	MSA	GS peptide	1000	71	75	Mg	5	Staurosporine
PHKG2	MSA	GS peptide	1000	8.1	10	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
PIK3CA/PIK3R1[1)9)]	MSA	Phosphatidyl-inositol	1000	58	50	Mg	5	PI-103
PIM1	MSA	S6k2 peptide	1000	640	500	Mg	5	Staurosporine
PIM2[1)]	MSA	S6k2 peptide	1000	4.0	5	Mg	5	Staurosporine
PIM3	MSA	S6k2 peptide	1000	130	150	Mg	5	Staurosporine
PKACα	MSA	Kemptide	1000	2.6	5	Mg	5	Staurosporine
PKACβ	MSA	Kemptide	1000	4.7	5	Mg	5	Staurosporine
PKACγ[1)]	MSA	Kemptide	1000	4.5	5	Mg	5	Staurosporine
PKCα[5)]	MSA	PKC peptide	1000	36	50	Mg+Ca	5+0.05	Staurosporine
PKCβ1[5)]	MSA	PKC peptide	1000	79	75	Mg+Ca	5+0.05	Staurosporine
PKCβ2[5)]	MSA	PKC peptide	1000	41	50	Mg+Ca	5+0.05	Staurosporine
PKCγ[5)]	MSA	PKC peptide	1000	74	75	Mg+Ca	5+0.05	Staurosporine
PKCδ[5)]	MSA	PKC peptide	1000	26	25	Mg	5	Staurosporine
PKCε[5)]	MSA	PKC peptide	1000	16	25	Mg	5	Staurosporine
PKCζ	MSA	PKC peptide	1000	11	10	Mg	5	Staurosporine
PKCη[5)]	MSA	PKC peptide	1000	36	50	Mg	5	Staurosporine
PKCθ[5)]	MSA	PKC peptide	1000	18	25	Mg	5	Staurosporine
PKCι	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[1)]	MSA	CDC25ctide	1000	5.6	5	Mg	5	Staurosporine
PLK2	IMAP	CHK2 peptide	50	30	30	Mg	10	K252b
PLK3	MSA	CDC25ctide	1000	6.8	5	Mg	5	K252b
PLK4	STK-ELISA	MBP	200	3.3	5	Mg	5	Staurosporine
PRKX[1)]	MSA	Kemptide	1000	20	25	Mg	5	Staurosporine
PYK2	MSA	Blk/Lyntide	1000	56	50	Mg	5	Staurosporine
QIK	MSA	AMARA peptide	1000	42	50	Mg	5	Staurosporine
RAF1	STK-ELISA	MAP2K1	85	0.39	0.5	Mg	40	ZM336372
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
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

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
SIK(SNF1LK)[1)]	MSA	AMARA peptide	1000	47	50	Mg	5	Staurosporine
skMLCK[3)]	MSA	MLCtide	1000	820	1000	Mg	5	Staurosporine
SLK[1)]	MSA	Moesin-derived peptide	1000	36	50	Mg	5	Staurosporine
SPHK1	MSA	Sphingosine	1000	20	25	Mg	5	-
SPHK2	MSA	Sphingosine	1000	620	600	Mg	5	-
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[1)]	MSA	DYRKtide-F	1000	14	10	Mg	5	Staurosporine
SYK	MSA	Blk/Lyntide	1000	26	25	Mg	5	Staurosporine
TAK1-TAB1	STK-ELISA	MAP2K7	180	10	10	Mg	10	Staurosporine
TAOK2[1)7)]	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[1)]	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[1)]	MSA	GS peptide	1000	8.8	10	Mg	5	Staurosporine
TSSK3[1)]	MSA	GS peptide	1000	45	50	Mg	5	Staurosporine
TTK	TK-ELISA	Lyn substrate peptide	250	0.16	0.2	Mn	10	Staurosporine
TXK[1)]	MSA	Srctide	1000	110	100	Mg	5	Staurosporine
TYK2[1)]	MSA	Srctide	1000	18	25	Mg	5	Staurosporine
TYRO3	MSA	CSKtide	1000	80	75	Mg	5	Staurosporine
WEE1	TK-ELISA	CDC2 peptide	250	7.7	10	Mg	5	Staurosporine
WNK1[1)]	MSA	SPAKtide	1000	140	150	Mg+Mn	5+3	Staurosporine
WNK2[1)]	MSA	SPAKtide	1000	48	50	Mg+Mn	5+3	Staurosporine
WNK3[1)]	MSA	SPAKtide	1000	48	50	Mg+Mn	5+3	Staurosporine
YES(YES1)	MSA	Srctide	1000	13	10	Mg	5	Staurosporine
YES(YES1)[T348I]	MSA	Srctide	1000	8.5	10	Mg	5	Staurosporine
ZAP70[1)]	MSA	Blk/Lyntide	1000	1.7	1	Mg+Mn	5+1	Staurosporine

ATP 1mM

Kinase	Platform	Substrate		ATP (μM)		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[1)]	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[F1174L]	MSA	Srctide	1000	49	1000	Mg	5	Staurosporine
ALK [L1196M]	MSA	Srctide	1000	63	1000	Mg	5	Staurosporine
ALK[R1275Q]	MSA	Srctide	1000	84	1000	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
EML4-ALK[1)]	MSA	Srctide	1000	43	1000	Mg	5	Staurosporine
NPM1-ALK	MSA	Srctide	1000	57	1000	Mg	5	Staurosporine
AMPKα1/β1/γ1	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[1)]	MSA	Blk/Lyntide	1000	250	1000	Mg	5	Staurosporine
BRSK1	MSA	CHKtide	1000	30	1000	Mg	5	Staurosporine
BTK	MSA	Srctide	1000	72	1000	Mg	5	Staurosporine
CaMK4[3)]	MSA	GS peptide	1000	20	1000	Mg	5	Staurosporine
CDC2/CycB1	MSA	Modified Histone H1	1000	34	1000	Mg	5	Staurosporine
CDC7/ASK[1)]	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[1)]	MSA	DYRKtide-F	1000	200	1000	Mg	5	Staurosporine
CDK5/p25	MSA	Modified Histone H1	1000	10	1000	Mg	5	Staurosporine
CDK6/CycD3[1)]	MSA	DYRKtide-F	1000	330	1000	Mg	5	Staurosporine
CDK7/CycH/MAT1[1)]	MSA	CTD3 peptide	1000	32	1000	Mg	5	Staurosporine
CDK9/CycT1[1)]	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
CK1α[1)]	MSA	CKtide	1000	4.1	1000	Mg	5	5-Iodotubercidin
CK1ε[1)]	MSA	CKtide	1000	16	1000	Mg	5	5-Iodotubercidin
CK2α1/β	MSA	CK2tide	1000	2.9	1000	Mg	5	TBB
CSK[1)]	MSA	Srctide	1000	4.8	1000	Mg+Mn	5+1	Staurosporine
DAPK1	MSA	DAPK1tide	1000	1.1	1000	Mg	5	Staurosporine
DDR1[1)]	MSA	IRS1	1000	94	1000	Mg	5	Staurosporine
DDR2[1)]	MSA	IRS1	1000	38	1000	Mg	5	Staurosporine
DYRK1B	MSA	DYRKtide-F	1000	59	1000	Mg	5	Staurosporine
EGFR	MSA	Srctide	1000	2.7	1000	Mg+Mn	5+1	Staurosporine
EGFR[d746-750/T790M]	MSA	Srctide	1000	5.4	1000	Mg+Mn	5+1	Staurosporine
EGFR[d746-750]	MSA	Srctide	1000	19	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/L858R]	MSA	Srctide	1000	1.9	1000	Mg+Mn	5+1	Staurosporine
EGFR[T790M]	MSA	Srctide	1000	0.9	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

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
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	5-Iodotubercidin
Erk2	MSA	Modified Erktide	1000	33	1000	Mg	5	5-Iodotubercidin
FAK[1)]	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
FGFR2	MSA	CSKtide	1000	66	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
FGFR4	MSA	CSKtide	1000	230	1000	Mg	5	Staurosporine
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	MSA	Srctide	1000	50	1000	Mg	5	Staurosporine
GSK3α	MSA	CREBtide-p	1000	12	1000	Mg	5	Staurosporine
GSK3β	MSA	CREBtide-p	1000	9.1	1000	Mg	5	Staurosporine
HCK	MSA	Srctide	1000	11	1000	Mg	5	Staurosporine
HER2	MSA	Srctide	1000	9.4	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
IGF1R	MSA	IRS1	1000	63	1000	Mg	5	Staurosporine
IKKβ	MSA	Modified IκBα-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[1)6)]	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	JNK Inhibitor II
JNK2	MSA	Modified Erktide	1000	21	1000	Mg	5	JNK Inhibitor II
JNK3	MSA	Modified Erktide	1000	6.0	1000	Mg	5	JNK Inhibitor II
KDR	MSA	CSKtide	1000	74	1000	Mg	5	Staurosporine
KIT[D816V][6)]	MSA	Srctide	1000	14	1000	Mg	5	Staurosporine
KIT[T670I][6)]	MSA	Srctide	1000	100	1000	Mg	5	Staurosporine
KIT[V560G][6)]	MSA	Srctide	1000	110	1000	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
KIT[V654A][6)]	MSA	Srctide	1000	220	1000	Mg	5	Staurosporine
KIT[6)]	MSA	Srctide	1000	370	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
MER	MSA	CSKtide	1000	36	1000	Mg	5	Staurosporine
MET	MSA	Srctide	1000	27	1000	Mg	5	Staurosporine
MET[Y1235D]	MSA	Srctide	1000	71	1000	Mg	5	Staurosporine
MST1[1)11)]	MSA	IRS1	1000	50	1000	Mg	5	K252b
MUSK[1)]	MSA	CSKtide	1000	14	1000	Mg+Mn	5+1	Staurosporine
NEK1[1)]	MSA	CDK7 peptide	1000	64	1000	Mg	5	Staurosporine
NEK2	MSA	CDK7 peptide	1000	65	1000	Mg	5	Staurosporine
NEK6[1)]	MSA	CDK7 peptide	1000	69	1000	Mg	5	PKR Inhibitor
NEK7[1)]	MSA	CDK7 peptide	1000	40	1000	Mg	5	PKR Inhibitor
NEK9[1)]	MSA	CDK7 peptide	1000	190	1000	Mg	5	Staurosporine
p38α	MSA	Modified Erktide	1000	150	1000	Mg	5	SB202190
p38β	MSA	Modified Erktide	1000	63	1000	Mg	5	SB202190
p38γ	MSA	Modified Erktide	1000	13	1000	Mg	5	Staurosporine
p38δ	MSA	Modified Erktide	1000	5.8	1000	Mg	5	Staurosporine
p70S6K	MSA	S6k2 peptide	1000	14	1000	Mg	5	Staurosporine
PAK2	MSA	DAPK1tide	1000	81	1000	Mg	5	Staurosporine
PBK[1)]	MSA	Histone H3 peptide	1000	33	1000	Mg	5	Staurosporine
PDGFRα	MSA	CSKtide	1000	28	1000	Mg	5	Staurosporine
PDGFRα[T674I][1)]	MSA	CSKtide	1000	11	1000	Mg	5	Staurosporine
PDGFRα[V561D]	MSA	CSKtide	1000	35	1000	Mg	5	Staurosporine
PDGFRβ	MSA	CSKtide	1000	23	1000	Mg	5	Staurosporine
PDK1[1)8)]	MSA	T308tide	1000	9.6	1000	Mg	5	Staurosporine
PIM1	MSA	S6k2 peptide	1000	640	1000	Mg	5	Staurosporine
PIM2[1)]	MSA	S6k2 peptide	1000	4.0	1000	Mg	5	Staurosporine
PKACα	MSA	Kemptide	1000	2.6	1000	Mg	5	Staurosporine
PKCα[5)]	MSA	PKC peptide	1000	36	1000	Mg+Ca	5+0.05	Staurosporine
PKCε[5)]	MSA	PKC peptide	1000	16	1000	Mg	5	Staurosporine
PKD2	MSA	GS peptide	1000	26	1000	Mg	5	Staurosporine
PLK1[1)]	MSA	CDC25ctide	1000	5.6	1000	Mg	5	Staurosporine
PLK3	MSA	CDC25ctide	1000	6.8	1000	Mg	5	K252b
PYK2	MSA	Blk/Lyntide	1000	56	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
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
SGK	MSA	SGKtide	1000	52	1000	Mg	5	Staurosporine
SRC	MSA	Srctide	1000	31	1000	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
SRM	MSA	Blk/Lyntide	1000	38	1000	Mg	5	Staurosporine
SYK	MSA	Blk/Lyntide	1000	26	1000	Mg	5	Staurosporine
TEC	MSA	Srctide	1000	55	1000	Mg	5	Staurosporine
TIE2	MSA	Blk/Lyntide	1000	94	1000	Mg	5	Staurosporine
TNK1[1)]	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[1)]	MSA	Srctide	1000	110	1000	Mg	5	Staurosporine
TYK2[1)]	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
ZAP70[1)]	MSA	Blk/Lyntide	1000	1.7	1000	Mg+Mn	5+1	Staurosporine

1) Reaction time is 5 hours.
2) Reaction time is 30 minutes.
3) $CaCl_2$, Calmodulin are added at the final concentration of 1 mM and 10 μg/ml, respectively.
4) cGMP is added at the final concentration of 5 μM.
5) Phosphatidylserine and Diacyl Glycerol are added at the final concentration of 50 μg/mL and 5 μg/mL, respectively.
6) Sodium orthovanadate is added at the final concentration of 25 μM.
7) Cantharidin is added at the final concentration of 10 μM.
8) PIFtide and Cantharidin are added at the final concentration of 2 μM and 20 μM, respectively.
9) Assay buffer is 20 mM HEPES(pH 7.5), 2mM DTT.
Sodium cholate, NaCl and cantharidine are added at the final concentration of 25 μM, 75 mM and 20 μM, respectively.
10) TPX2 peptide is added at the final concentration of 200 nM.
11) Cantharidin is added at the final concentration of 20 μM.

Cascade assay

Kinase	Platform	Substrate		ATP (μM)		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(MAP3K8)	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine
DLK(MAP3K12)[1)]	MSA	MAP2K4/MAP2K7	0.5/0.5	-	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[1)]	MSA	JNK2	50	-	1000	Mg	5	Staurosporine
MAP2K5[1)]	MSA	Erk5	50	-	1000	Mg	5	Staurosporine
MAP2K6	MSA	p38a	10	-	1000	Mg	5	Staurosporine
MAP2K7[1)]	MSA	JNK2	50	-	1000	Mg	5	Staurosporine
MAP3K1	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine
MAP3K2[1)]	MSA	MAP2K4/MAP2K7	0.5/0.5	-	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(MAP3K9)	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine
MLK2(MAP3K10)	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine
MLK3(MAP3K11)	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine
MOS	MSA	MAP2K1	1	-	1000	Mg	5	Staurosporine

Kinase	Platform	Substrate		ATP (μM)		Metal		Positive control
		Name	(nM)	Km	Assay	Name	(mM)	
RAF1	MSA	MAP2K1	1	-	1000	Mg	5	ZM336372
TAK1-TAB1(MAP3K7)[1)]	MSA	MAP2K4/MAP2K7	0.5/0.5	-	1000	Mg	5	Staurosporine

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(MAP3K8)	MAP2K1	1	Erk2	2.5	Modified Erktide	1000
DLK(MAP3K12)	[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	-	-	p38α	10	Modified Erktide	1000
MAP2K4	-	-	JNK2	50	Modified Erktide	1000
MAP2K5	-	-	Erk5	50	EGFR-derived peptide	1000
MAP2K6	-	-	p38α	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	p38α	10	Modified Erktide	1000
MAP3K4	MAP2K6	1	p38α	10	Modified Erktide	1000
MAP3K5	MAP2K6	1	p38α	10	Modified Erktide	1000
MLK1(MAP3K9)	MAP2K1	1	Erk2	2.5	Modified Erktide	1000
MLK2(MAP3K10)	MAP2K1	1	Erk2	2.5	Modified Erktide	1000
MLK3(MAP3K11)	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
TAK1-TAB1(MAP3K7)	[MAP2K4/MAP2K7]	0.5/0.5	JNK2	50	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_{50} value is calculated from concentration vs. %Inhibition curves by fitting to a four parameter logistic curve.

Memo

http://www.carnabio.com

Carna Biosciences, Inc.
BMA 3F, 1-5-5 Minatojima-Minamimachi, Chuo-ku, Kobe 650-0047 JAPAN
TEL：078-302-7091 / FAX：078-302-7086
E-mail：info@carnabio.com

Carna's wholly-owned subsidiary
CarnaBio USA, Inc.
209 West Central Street, Suite 127, Natick, MA 01760 USA
TEL: +1-508-650-1244 / Toll-Free: +1-888-645-1233
E-mail: orders@carnabio.com / FAX: +1-508-650-1722