

## PhosphoSens Sensor Peptides for Continuous Fluorescent Intensity Kinase Assays

### A Powerful Approach for Understanding Kinase and Kinase Inhibitor Activity

#### Search Below to Match Your Kinase With Our Sensor Peptide Substrate

**Bulk Sensor Peptide (PN:CSKS-AQTxxxxB)**: Designed for higher throughput applications. 1mg is sufficient for ~2,000 assays in a low-volume 384-well plate (10µM sensor peptide in 25µL reaction volume). Available from 1mg to +200mg aliquots. We also offer optimized buffers and reagents (sold separately, refer to Table 7 below).

**Continuous Evaluation Kits (PN:CSKS-AQTxxxxxK)**: Designed for streamlined technology assessment. Each Evaluation kit enables 96 reactions in a low-volume 384-well plate (10µM sensor peptide in 25µL reaction volume). Includes all assay components (excluding your kinase). Refer to Table 6 below.

HGNC (Common) Name	HGNC Approved Full Name	GenBank Acc.No.	Manning Name	Ser (S) Thr (T) Tyr (Y)	Family	Sensor Peptide Product Number (Bulk, Kit)	Sensor Peptide MW (g/mol)	Enzyme Used in Sensor Peptide Development	Continuous Assay Strength*
*See tables 2-5 below for Assay Strength definition and reaction conditions.									
ABL1	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	Carna (08-101)	VS
ABL1 [E255K]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	Carna (08-094)	VS
ABL1 [E255V]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	SignalChem (A03-12HH)	VS
ABL1 [H396P]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	SignalChem (A03-12LG)	VS
ABL1 [O252H]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	SignalChem (A03-12FG)	VS
ABL1 [T315I]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	Carna (08-093)	VS
ABL1 [Y253F]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	SignalChem (A03-12EG)	VS
ABL1 [Y253H]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	SignalChem (A03-12GH)	VS
ABL2 (ARG)	ABL proto-oncogene 2, non-receptor tyrosine kinase	NM_005157	ARG	Y	Abl	CSKS-AQT0032B CSKS-AQT0032K	1674.0	Carna (08-102)	VS
AKT1 (PKB)	AKT Serine/Threonine Kinase 1	NM_005163	AKT1	S/T	Akt	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-101)	VS
AKT1 (Full Length)	AKT Serine/Threonine Kinase 1	NM_005163	AKT1	S/T	Akt	CSKS-AQT0536B CSKS-AQT0536K	1469.7	SignalChem(A16-10H)	VS
AKT2 (PKBb)	AKT Serine/Threonine Kinase 2	NM_001626	AKT2	S/T	Akt	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-102)	VS
AKT3 (PKBg)	AKT Serine/Threonine Kinase 3	NM_005465	AKT3	S/T	Akt	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-103)	VS
ALK	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-518)	VS
ALK [C1156Y]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-530)	VS
ALK [F1174L]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-519)	VS
ALK [G1202R]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-544)	VS
ALK [G1269A]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-537)	VS
ALK [L1196M/G1202R]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna(08-556)	VS
ALK [L1196M]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-529)	VS
ALK [R1275Q]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-520)	VS
ALK [T1151-L1152 INS T]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-539)	VS
ALK:NPM1 (NPM1-ALK)	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-517)	S
AP2 (AAK1)	AP2 associated kinase 1	NM_014911	AAK1	S/T	NAK	Please inquire.			

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AURKA (AURA)	aurora kinase A	NM_003600	AurA	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-101)	VS
AURKB (AURB)	aurora kinase B	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-102)	VS
AURKB (AURB) [G160L]	aurora kinase B	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	SignalChem (A31-10BG)	VS
AURKC (AURC)	aurora kinase C	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-103)	VS
AXL	AXL receptor tyrosine kinase	NM_001699	AXL	Y	Axl	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-107)	VS
BCKDK	branched chain ketoacid dehydrogenase kinase	NM_005881	BCKDK	S/T	PDHK	Please inquire.			
BLK	BLK proto-oncogene, Src family tyrosine kinase	NM_001715	BLK	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-164)	VS
BMP2K (BIKE)	BMP2 inducible kinase	NM_017593	BIKE	S/T	NAK	Please inquire.			
BMX	BMX non-receptor tyrosine kinase	NM_001721	BMX	Y	Tec	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-179)	VS
BRAF (BRAF1, RAFB1)	B-Raf proto-oncogene, serine/threonine kinase	NP_004324.2	BRAF	S/T	RAF	Please inquire.			
BRAF, b-[V600E]	B-Raf proto-oncogene, serine/threonine kinase	NM_004333	BRAF	S/T	RAF	CSKS-AQT0682B CSKS-AQT0682K	2715.0	INVT (PV3849)	S
BRSK1	BR serine/threonine kinase 1	NM_032430	BRSK1	S/T	CAMKL	CSKS-AQT0900B CSKS-AQT0900K	1998.4	Carna (02-115)	VS
BRSK2	BR serine/threonine kinase 2	NM_003957	BRSK2	S/T	CAMKL	CSKS-AQT0900B CSKS-AQT0900K	1998.4	Carna (02-116)	VS
BTK	Bruton tyrosine kinase	NM_000061	BTK	Y	Tec	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-180)	VS
BTK [C481S]	Bruton tyrosine kinase	NM_000061	BTK	Y	Tec	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-547)	VS
BUB1	BUB1 mitotic checkpoint serine/threonine kinase	NM_004336	BUB1	S/T	BUB	CSKS-AQT0345B CSKS-AQT0345K	2682.1	Carna (05-187)	VS
BUBR1/BUB1B	BUB1 mitotic checkpoint serine/threonine kinase B	NM_001211	BUBR1	S/T	BUB	CSKS-AQT0683B CSKS-AQT0683K	2616.9	Carna (05-105)	VS
CAMK1 (CAMK1α)	calcium/calmodulin dependent protein kinase I	NM_003656	CaMK1a	S/T	CAMK1	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-104)	VS <sup>1</sup>
CAMK1D (CAMK1δ)	calcium/calmodulin dependent protein kinase ID	NM_020397	CaMK1d	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420K-1	1821.2	SignalChem (C09-10G)	VS <sup>1</sup>
CAMK1G (CAMK1γ)	calcium/calmodulin dependent protein kinase IG	NM_020439	CaMK1g	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420K-1	1821.2	SignalChem (C10-11G)	VS <sup>1</sup>
CAMK2A (CAMK2α)	calcium/calmodulin dependent protein kinase II alpha	NM_003656	CaMK2a	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425K-1	2143.5	Carna (02-109)	VS <sup>1</sup>
CAMK2B (CAMK2β)	calcium/calmodulin dependent protein kinase II beta	NM_001220	CaMK2b	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425K-1	2143.5	Carna (02-110)	VS <sup>1</sup>
CAMK2D (CAMK2δ)	calcium/calmodulin dependent protein kinase II delta	NM_001221	CaMK2d	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425K-1	2143.5	Carna (02-111)	VS <sup>1</sup>
CAMK2G (CAMK2γ)	calcium/calmodulin dependent protein kinase II gamma	NM_001222	CaMK2g	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425K-1	2143.5	Carna (02-112)	VS <sup>1</sup>
CAMK4	calcium/calmodulin dependent protein kinase IV	NM_001744	CaMK4	S/T	CAMK1	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-108)	VS <sup>1</sup>
CAMKK1	calcium/calmodulin dependent protein kinase kinase 1	NM_006549	CaMKK2	S/T	CAMKK	CSKS-AQT0699B CSKS-AQT0699K-1	3500.9	Carna (05-157)	S <sup>1</sup>
CAMKK2	calcium/calmodulin dependent protein kinase kinase 2	NM_006549	CaMKK2	S/T	CAMKK	Please inquire.			
CDC42BPA (MRCKA)	CDC42 binding protein kinase alpha	NM_003607	MRCKa	S/T	DMPK	Please inquire.			
CDC42BPB (MRCKB)	CDC42 binding protein kinase beta	NM_006035	MRCKb	S/T	DMPK	Please inquire.			
CDC42BPG (DMPK2)	CDC42 binding protein kinase gamma	NM_017525	DMPK2	S/T	DMPK	CSKS-AQT0324B CSKS-AQT0324K	1863.3	SignalChem (D17-11G)	S
CDC7/DBF4 (CDC7)	cell division cycle 7	NM_003503	CDC7	S/T	CDC7	Please inquire.			
CDK1 (CDC2)/CycA1	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	SignalChem (C22-18BG)	VS
CDK1 (CDC2)/CycA2	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Carna (04-119)	VS

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CDK1/CycB1(CDC2)	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Carna (04-102)	VS
CDK1/CycE1	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Proqinase (0134-0055-1)	S
CDK2/CycA1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	SignalChem (C29-10BG)	VS
CDK2/CycA2	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Carna (04-103)	VS
CDK2/CycD1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.			
CDK2/CycE1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Carna (04-165)	VS
CDK2/CycE2	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	SignalChem (C29-18BG)	VS
CDK2/CycO	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.			
CDK3/CycE1	cyclin dependent kinase 3	NM_001258	CDK3	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	Carna (04-104)	VS
CDK3/CycE2	cyclin dependent kinase 3	NM_001258	CDK3	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297K	1504.9	SignalChem (C30-10BG)	VS
CDK4 /CycD3	cyclin dependent kinase 4	NM_000075	CDK4	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258K	2506.9	Carna (04-105)	VS
CDK4/CycD1	cyclin dependent kinase 4	NM_001258	CDK3	S/T	CDK	Please inquire.			
CDK4/CycD2	cyclin dependent kinase 4	NM_000075	CDK4	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258K	2506.9	Proqinase (0142-0375-1)	S
CDK5/p25	cyclin dependent kinase 5	NM_004935	CDK5	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255K	1449.8	Carna (04-106)	VS
CDK5/p35	cyclin dependent kinase 5	NM_004935	CDK5	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255K	1449.8	SignalChem (C33-10BG)	VS
CDK6/CycD1	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258K	2506.9	Carna (04-114)	VS
CDK6/CycD2	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	Please inquire.			
CDK6/CycD3	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258K	2506.9	Carna (04-107)	VS
CDK7/CycH/MAT1	cyclin dependent kinase 7	NM_001799	CDK7	S/T	CDK	CSKS-AQT0733B CSKS-AQT0733K	3243.6	Carna (04-108)	VS
CDK7/CycH1	cyclin dependent kinase 7	NM_001799	CDK7	S/T	CDK	Please inquire.			
CDK9 (TAK) w/CycK	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT1007B CSKS-AQT1007K	2782.5	Carna (04-111)	S
CDK9 (TAK) w/CycT1	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT0733B CSKS-AQT0733K	3243.6	Carna (04-110)	S
CDK9 (TAK)/CycT2	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT0733B CSKS-AQT0733K	3243.6	Carna (04-121)	S
CDK12 (CRK7)/CycK	cyclin dependent kinase 12	NM_016507.3	CRK7	S/T	CDK	Please inquire.			
CDK13 (CHED)/CycK	cyclin dependent kinase 13	NM_003718	CHED	S/T	CDK	Please inquire.			
CDK14/CycY	cyclin dependent kinase 14		CHED	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	SignalChem(P15-10G)	S
CDK15/CycB1	cyclin dependent kinase 15			S/T	CDK	Please inquire.			
CDK16/CycY	cyclin dependent kinase 16	NM_006201	PCTAIRE1	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258K	2506.9	Carna(04-116)	S
CDK17 (PCTAIRE2)/CycY	cyclin dependent kinase 17	NM_002595	PCTAIRE2	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	SignalChem(P10-10G)	S
CDK17 (PCTAIRE2, PCTK2)/p35NCK	cyclin dependent kinase 17	NM_002595	PCTAIRE2	S/T	CDK	Please inquire.			
CDK18/CycY (PCTAIRE3)	cyclin dependent kinase 18	NM_002596	PCTAIRE3	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255K	1449.8	SignalChem(P11-10G)	S
CDK19 (CDK11)/CycC	cyclin dependent kinase 19	NM_015076	CDK11	S/T	CDK	Please inquire.			
CDKL5	cyclin-dependent kinase-like 5	NM_003159	CDKL5	S/T	CDKL	Please inquire.			
CDPK1 (toxoplasma gondii)						CSKS-AQT0124B CSKS-AQT0124K	1749.0	Academic Lab	VS
CDPK3 (toxoplasma gondii)						CSKS-AQT0124B CSKS-AQT0124K	1749.0	Academic Lab	VS
CHEK1 (CHK1)	checkpoint kinase 1	NM_001274	CHK1	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-117)	VS
CHEK2 (CHK2)	checkpoint kinase 2	NM_007194	CHK2	S/T	RAD53	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-162)	VS

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CHUK (IKKa, IKKα)	conserved helix-loop-helix ubiquitous kinase	NM_001278	IKKa	S/T	IKK	Please inquire.			
CIT (CRIK)	citron rho-interacting serine/threonine kinase	NM_007174	CRIK	S/T	DMPK	CSKS-AQT0537B CSKS-AQT0537K	1509.8	Carna (01-104)	S
CLK1	CDC like kinase 1	NM_004071	CLK1	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	SignalChem (C57-11G)	S
CLK2	CDC like kinase 2	NM_001291	CLK2	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	Carna (04-127)	VS
CLK3	CDC like kinase 3	NM_001292	CLK3	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	Carna (04-128)	VS
CLK4	CDC like kinase 4	NM_020666	CLK4	S/T	CLK	Please inquire.			
CSF1R (FMS)	colony stimulating factor 1 receptor	NM_005211	FMS	Y	PDGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-155)	VS
CSK	C-terminal Src kinase	NM_004383	CSK	Y	Csk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-111)	VS
CSNK1A1 (CK1A1, CK1α)	casein kinase 1 alpha 1	NM_001892	CK1a	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-101)	VS
CSNK1A1L (CK1A1L, CK1α2)	casein kinase 1 alpha 1 like	NM_145203	CK1a2	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	SignalChem (C75-10G)	VS
CSNK1D (CK1D, CK1δ)	casein kinase 1 delta	NM_001893	CK1d	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-103)	VS
CSNK1E (CK1E, CK1ε)	casein kinase 1 epsilon	NM_001894	CK1e	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-104)	VS
CSNK1G1 (CK1G1, CK1γ1)	casein kinase 1 gamma 1	NM_022048	CK1g1	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-105)	VS
CSNK1G2 (CK1G2, CK1γ2)	casein kinase 1 gamma 2	NM_001319	CK1g2	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-106)	VS
CSNK1G3 (CK1G3, CK1γ3)	casein kinase 1 gamma 3	NM_004384	CK1g3	S/T	CK1	CSKS-AQT0709B CSKS-AQT0709K	1889.1	Carna (03-107)	VS
CSNK2A1 (CK2A1, CK2α1)	casein kinase 2 alpha 1	NM_001895	CK2a1	S/T	CK2	CSKS-AQT0696B CSKS-AQT0696K	2134.2	Thermo (PV3248)	VS
CSNK2A2 (CK2A2, CK2α2)	casein kinase 2 alpha 2	NM_001896	CK2a2	S/T	CK2	CSKS-AQT0696B CSKS-AQT0696K	2134.2	Thermo (PV3624)	S
DAPK1	death-associated protein kinase 1	NM_004938	DAPK1	S/T	DAPK	CSKS-AQT0173B CSKS-AQT0173K-1	2438.9	SignalChem (D01-11G)	VS <sup>1</sup>
DAPK2 (DRP-1)	death-associated protein kinase 2	NM_014326	DAPK2	S/T	DAPK	CSKS-AQT0236B CSKS-AQT0236K-1	2476.9	SignalChem (D02-10G)	VS <sup>1</sup>
DAPK3 (ZIPK)	death-associated protein kinase 3	NM_001348	DAPK3	S/T	DAPK	CSKS-AQT0237B CSKS-AQT0237K-1	2444.8	Carna (02-136)	VS <sup>1</sup>
DCLK1 (DCAMKL1)	doublecortin like kinase 1	NM_004734	DCAMKL1	S/T	DCAMKL	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-139)	S <sup>1</sup>
DCLK2 (DCAMKL2)	doublecortin like kinase 2	NM_152619	DCAMKL2	S/T	DCAMKL	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-140)	VS <sup>1</sup>
DDR1 (SRC treated)	discoidin domain receptor tyrosine kinase 1	NM_001954	DDR1	Y	DDR	CSKS-AQT0280B CSKS-AQT0280K	1801.2	Carna (08-132)	S
DDR2	discoidin domain receptor tyrosine kinase 2	NM_006182	DDR2	Y	DDR	CSKS-AQT0235B CSKS-AQT0235K	1830.2	Carna (08-114)	VS
DMPK (DMPK1)	DM1 protein kinase	NM_006904	DMPK1	S/T	DMPK	Please inquire.			
DSTYK (RIPK5, SGK496)	dual serine/threonine and tyrosine protein kinase	NM_015375	SGK496	S/T	Other-Unique	Please inquire.			
DYRK1A	dual specificity tyrosine phosphorylation regulated kinase 1A	NM_001396	DYRK1A	S/T	DYRK	CSKS-AQT0260B CSKS-AQT0260K	1608.9	Carna (04-130)	VS
DYRK1B	dual specificity tyrosine phosphorylation regulated kinase 1B	NM_004714	DYRK1B	S/T	DYRK	CSKS-AQT0260B CSKS-AQT0260K	1608.9	Carna (04-131)	VS
DYRK2	dual specificity tyrosine phosphorylation regulated kinase 2	NM_006482	DYRK2	S/T	DYRK	CSKS-AQT0260B CSKS-AQT0260K	1608.9	Carna (04-132)	VS
DYRK3	dual specificity tyrosine phosphorylation regulated kinase 3	NM_003582	DYRK3	S/T	DYRK	CSKS-AQT0260B CSKS-AQT0260K	1608.9	Carna (04-133)	VS
DYRK4	dual specificity tyrosine phosphorylation regulated kinase 4	NM_003845	DYRK4	S/T	DYRK	CSKS-AQT0260B CSKS-AQT0260K	1608.9	Carna (04-434)	VS
EEF2K (eEF2K)	eukaryotic elongation factor 2 kinase	NM_013302	eEF2K	S/T	Alpha	CSKS-AQT0349B CSKS-AQT0349K-1	2673.2	Carna (10-113)	VS <sup>1</sup>
EGFR (D770_N771insNP G)	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	Carna (08-553)	VS

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EGFR (ERBB1)	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	BPS (40187)	VS
EGFR [C797S/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122ZG)	VS
EGFR [d746-750/C797S/T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122UG)	VS
EGFR [d746-750/C797S]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122TG)	VS
EGFR [d746-750/T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122KG)	VS
EGFR [d746-750]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	Carna (08-527)	VS
EGFR [L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122BG)	VS
EGFR [L861Q]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	Carna (08-513)	VS
EGFR [T790M/C797S/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	SignalChem (E10-122VG)	VS
EGFR [T790M/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	Carna (08-510)	VS
EGFR [T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0734B CSKS-AQT0734K	1528.7	Carna (08-194)	VS
EIF2AK1 (HRI)	eukaryotic translation initiation factor 2 alpha kinase 1	NM_014413	HRI	S/T	PEK	CSKS-AQT0748B CSKS-AQT0748K	2603.1	Carna (05-154)	M
EIF2AK2 (PKR)	eukaryotic translation initiation factor 2 alpha kinase 2	NM_002759	PKR	S/T	PEK	CSKS-AQT0355B CSKS-AQT0355K	2705.0	Carna (05-156)	VS
EIF2AK3 (PERK/PEK)	eukaryotic translation initiation factor 2 alpha kinase 3	NM_004836	PEK	S/T	PEK	CSKS-AQT0356B CSKS-AQT0356K	2713.0	Carna (05-155)	VS
EIF2AK4 (GCN2)	eukaryotic translation initiation factor 2 alpha kinase 4	NM_001013703	GCN2	S/T	PEK	CSKS-AQT0349B CSKS-AQT0349K-2	2673.2	Carna (05-153)	VS <sup>2</sup>
EPHA1	EPH receptor A1	NM_005232	Epha1	Y	Eph	CSKS-AQT0658B CSKS-AQT0658K	1367.6	Carna (08-119)	VS
EPHA2	EPH receptor A2	NM_004431	Epha2	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-121)	VS
EPHA3	EPH receptor A3	NM_005233	Epha3	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-122)	VS
EPHA4	EPH receptor A4	NM_004438	Epha4	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-123)	VS
EPHA5	EPH receptor A5	NM_004439	Epha5	Y	Eph	CSKS-AQT0658B CSKS-AQT0658K	1367.6	Carna (08-124)	VS
EPHA6	EPH receptor A6	XM_114973	Epha6	Y	Eph	CSKS-AQT0104B CSKS-AQT0104K	1361.6	Carna (08-125)	VS
EPHA7	EPH receptor A7	NM_004440	Epha7	Y	Eph	CSKS-AQT0102B CSKS-AQT0102K	1381.6	Carna (08-126)	VS
EPHA8	EPH receptor A8	NM_020526	Epha8	Y	Eph	CSKS-AQT0104B CSKS-AQT0104K	1361.6	Carna (08-127)	VS
EPHB1	EPH receptor B1	NM_004441	Ephb1	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-128)	VS
EPHB2	EPH receptor B2	NM_004442	Ephb2	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-129)	VS
EPHB3	EPH receptor B3	NM_004443	EpHb3	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-130)	VS
EPHB4	EPH receptor B4	NM_004444	Ephb4	Y	Eph	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-131)	VS
ERBB2 (HER2)	erb-b2 receptor tyrosine kinase 2	NM_004448	HER2/ErbB2	Y	EGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	BPS (40230)	VS
ERBB2 (HER2) [A775/G776insYVMA]	erb-b2 receptor tyrosine kinase 2	NM_004448	HER2/ErbB2	Y	EGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	SignalChem (E27-13BG)	VS
ERBB4 (HER4)	erb-b2 receptor tyrosine kinase 4	NM_005235	HER4/ErbB4	Y	EGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-118)	VS
ERN1 (IRE1)	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	Thermo (A30971)	S



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ERN1 [R727A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	SignalChem(E31-12BG)	VS
ERN1 [R728A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	SignalChem(E31-12CG)	VS
ERN1 [R727A/R728A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	SignalChem(E31-12DG)	S
ERN2 (IRE2)	endoplasmic reticulum to nucleus signaling 2	NM_033266	IRE2	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	SignalChem(E32-11G)	M
FAM20C	FAM20C golgi associated secretory pathway kinase	NM_020223				CSKS-AQT0698B CSKS-AQT0698K	1891.8	SignalChem(F18-11G)	S
FER	FER tyrosine kinase	NM_005246	FER	Y	Fer	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-139)	VS
FES	FES proto-oncogene, tyrosine kinase	NM_002005	FES	Y	Fer	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-140)	VS
FGFR1	fibroblast growth factor receptor 1	NM_000604	FGFR1	Y	FGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-133)	VS
FGFR2	fibroblast growth factor receptor 2	NM_022970.3	FGFR2	Y	FGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-134)	VS
FGFR3	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-135)	VS
FGFR3 [G697C]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Proqinase (1071-0000-1)	S
FGFR3 [K650E]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-501)	VS
FGFR3 [K650M]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-199)	VS
FGFR3 [V555L]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Carna (08-548)	VS
FGFR3 [V555M]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-543)	VS
FGFR4	fibroblast growth factor receptor 4	NM_002011	FGFR4	Y	FGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-136)	VS
FGR	FGR proto-oncogene, Src family tyrosine kinase	NM_005248	FGR	Y	Src	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-166)	VS
FLT1	fms related tyrosine kinase 1	NM_002019	FLT1	Y	VEGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-189)	VS
FLT3	fms related tyrosine kinase 3	NM_004119	FLT3	Y	PDGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-154)	VS
FLT4	fms related tyrosine kinase 4	NM_002020	FLT4	Y	VEGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-190)	VS
FRK	fyn related Src family tyrosine kinase	NM_002031	FRK	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-167)	VS
FYNa	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-168)	VS
FYNb	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-531)	VS
GAK	cyclin G associated kinase	NM_005255	GAK	S/T	NAK	Please inquire.			
GRK1 (RHOK)	G protein-coupled receptor kinase 1	NM_002929	RHOK	S/T	GRK	CSKS-AQT0603B CSKS-AQT0603K	2501.8	SignalChem(R03-10G)	S
GRK2 (ADRBK1, BARK1)	G protein-coupled receptor kinase 2	NM_001619	BARK1	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641K	3339.6	Thermo (PV3361)	VS
GRK3 (ADRBK2, BARK2)	G protein-coupled receptor kinase 3	NM_005160	BARK2	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641K	3339.6	Carna (01-112)	S
GRK4 (GPRK4)	G protein-coupled receptor kinase 4	NM_005307	GPRK4	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641K	3339.6	Carna (01-313)	M
GRK5 (GPRK5)	G protein-coupled receptor kinase 5	NM_005308	GPRK5	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641K	3339.6	INVT (PV3824)	S
GRK6 (GPRK6)	G protein-coupled receptor kinase 6	NM_002082	GPRK6	S/T	GRK	Please inquire.			
GRK7 (GPRK7)	G protein-coupled receptor kinase 7	NM_139209	GPRK7	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641K	3339.6	Carna (01-316)	S
GSK3A (GSK3α)	glycogen synthase kinase 3 alpha	NM_019884	GSK3A	S/T	GSK	CSKS-AQT0157B CSKS-AQT0157K	2005.9	Carna (04-140)	VS
GSK3B (GSK3β)	glycogen synthase kinase 3 beta	NM_001146156	GSK3B	S/T	GSK	CSKS-AQT0157B CSKS-AQT0157K	2005.9	Carna (04-141)	VS
HASPIN	histone H3 associated protein kinase	NM_031965	Haspin	S/T	Haspin	CSKS-AQT0798B CSKS-AQT0798K	1827.1	Carna (05-111)	VS
HCK	HCK proto-oncogene, Src family tyrosine kinase	NM_002110	HCK	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	1384.6	Carna (08-169)	VS
HIPK1	homeodomain interacting protein kinase 1	NM_152696	HIPK1	S/T	DYRK	CSKS-AQT0849B CSKS-AQT0849K	1929.2	Carna (04-135)	M

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HIPK2	homeodomain interacting protein kinase 2	NM_022740	HIPK2	S/T	DYRK	CSKS-AQT0134B CSKS-AQT0134K	2357.7	Carna (04-136)	VS
HIPK3	homeodomain interacting protein kinase 3	NM_005734	HIPK3	S/T	DYRK	CSKS-AQT0849B CSKS-AQT0849K	1929.2	Carna (04-137)	M
HIPK4	homeodomain interacting protein kinase 4	NM_144685	HIPK4	S/T	DYRK	CSKS-AQT0850B CSKS-AQT0850K	1872.2	Carna (04-138)	
HUNK	hormonally up-regulated Neu-associated kinase	NM_014586	HUNK	S/T	CAMKL	Please inquire.			
ICK	intestinal cell kinase	NM_014920	ICK	S/T	RCK	CSKS-AQT0257B CSKS-AQT0257K	2011.4	Carna (04-156)	S
IGF1R	insulin-like growth factor 1 receptor	NM_000875	IGF1R	Y	InsR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-141)	VS
IKKB (IKK $\beta$ )	inhibitor of nuclear factor kappa B kinase subunit beta	NM_001556	IKKb	S/T	IKK	CSKS-AQT0215B CSKS-AQT0215K	1474.6	Carna (05-084)	VS
IKKE (IKK $\epsilon$ )	inhibitor of nuclear factor kappa B kinase subunit epsilon	NM_014002	IKKe	S/T	IKK	CSKS-AQT0215B CSKS-AQT0215K	1474.6	Thermo (PV4875)	VS
INSR (IR)	insulin receptor	NM_000208	INSR	Y	InsR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-142)	VS
INSRR (IRR)	insulin receptor-related receptor	NM_014215	IRR	Y	InsR	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-143)	VS
IRAK1	interleukin 1 receptor associated kinase 1	NM_001569	IRAK1	S/T	IRAK	CSKS-AQT0326B CSKS-AQT0326K	2079.5	Carna (09-101)	VS
IRAK4	interleukin 1 receptor associated kinase 4	NM_016123	IRAK4	S/T	IRAK	CSKS-AQT0326B CSKS-AQT0326K	2079.5	Carna (09-145)	VS
ITK	IL2-inducible T cell kinase	NM_005546	ITK	Y	Tec	CSKS-AQT0101B CSKS-AQT0101K	1384.6	Thermo (PV3875)	VS
JAK1 [JH1]	Janus kinase 1	NM_002227	JAK1	Y	Jak	CSKS-AQT0663B CSKS-AQT0663K	1341.6	Thermo (PV4774)	S
JAK1 [JH1-JH2]	Janus kinase 1	NM_002227	JAK1	Y	Jak	CSKS-AQT0663B CSKS-AQT0663K	1341.6	SignalChem (J01-11G)	S
JAK2 [JH1]	Janus kinase 2	NM_004972	JAK2	Y	Jak	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-045)	VS
JAK2 [JH1-JH2]	Janus kinase 2	NM_004972	JAK2	Y	Jak	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-514)	VS
JAK3 [JH1]	Janus kinase 3	NM_000215	JAK3	Y	Jak	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-046)	VS
KDR (VEGFR2)	kinase insert domain receptor	NM_002253	KDR	Y	VEGFR	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-191)	VS
KIT	KIT proto-oncogene receptor tyrosine kinase	NM_000222	KIT	Y	PDGFR	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-156)	VS
KSR1	kinase suppressor of ras 1	NM_014238	KSR1	S/T	RAF	CSKS-AQT0694B CSKS-AQT0694K	1466.8	SignalChem (K07-11BG)	M
KSR2	kinase suppressor of ras 2	NM_173598	KSR2	S/T	RAF	CSKS-AQT0694B CSKS-AQT0694K	1466.8	SignalChem (K01-11G)	S
LATS1	large tumor suppressor kinase 1	NM_004690	LATS1	S/T	NDR	CSKS-AQT0476B CSKS-AQT0476K	2349.7	Carna (01-523)	VS
LATS2	large tumor suppressor kinase 2	NM_014572	LATS2	S/T	NDR	CSKS-AQT0476B CSKS-AQT0476K	2349.7	Carna (01-524)	VS
LCK	LCK proto-oncogene, Src family tyrosine kinase	NM_005356	LCK	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-170)	VS
LIMK1	LIM domain kinase 1	NM_002314	LIMK1	S/T	LISK	Please inquire.			
LIMK2	LIM domain kinase 2	CR456513	LIMK2	S/T	LISK	Please inquire.			
LRRK2	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	CSKS-AQT0615B CSKS-AQT0615K	2818.2	Invitrogen (PV48783)	VS
LRRK2 (R1441G)	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	CSKS-AQT0615B CSKS-AQT0615K	2818.2	SignalChem (L10-12BG)	VS
LRRK2 (R1441H)	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	CSKS-AQT0615B CSKS-AQT0615K	2818.2	SignalChem (L10-12CG)	VS
LRRK2 [G2019S]	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	CSKS-AQT0615B CSKS-AQT0615K	2818.2	SignalChem (L10-12GG)	VS
LTK	leukocyte receptor tyrosine kinase	NM_002344	LTK	Y	ALK	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-106)	VS
LYNa	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-171)	VS
LYNb	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-172)	VS
MAK	male germ cell associated kinase	NM_005906	MAK	S/T	RCK	CSKS-AQT0257B CSKS-AQT0257K	2011.4	SignalChem (M01-10G)	S
MAP2K1 (MEK1)	mitogen-activated protein kinase kinase 1	NM_002755	MAP2K1	Dual Specificity	STE7	CSKS-AQT0972B CSKS-AQT0972K	1993.3	Carna (07-141)	VS

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MAP2K2 (MEK2)	mitogen-activated protein kinase kinase 2	NM_030662	MAP2K2	Dual Specificity	STE7	CSKS-AQT0972B CSKS-AQT0972K	1993.3	Carna (07-142)	VS
MAP2K3 (MEK3)	mitogen-activated protein kinase kinase 3	NM_002756	MAP2K3	Dual Specificity	STE7	Please inquire.			
MAP2K4 (MEK4)	mitogen-activated protein kinase kinase 4	NM_003010	MAP2K4	Dual Specificity	STE7	Please inquire.			
MAP3K1 (MEKK1)	mitogen-activated protein kinase kinase kinase 1	NM_005921	MAP3K1	S/T	STE11	CSKS-AQT0623B CSKS-AQT0623K		Carna (07-103)	S
MAP3K2 (MEKK2)	mitogen-activated protein kinase kinase kinase 2	NM_006609	MAP3K2	S/T	STE11	CSKS-AQT0739B CSKS-AQT0739K	2613.1	SignalChem (M10-10G)	M
MAP3K3 (MEKK3)	mitogen-activated protein kinase kinase kinase 3	NM_002401	MAP3K3	S/T	STE11	CSKS-AQT0743B CSKS-AQT0743K	2114.5	Carna (07-105)	M
MAP3K5 (ASK1)	mitogen-activated protein kinase kinase kinase 5	NM_005923	MAP3K5	S/T	STE11	CSKS-AQT0557B CSKS-AQT0557K	2120.5	SignalChem (M13-10G)	VS
MAP3K6 (ASK2)	mitogen-activated protein kinase kinase kinase 6	NM_004672	ASK2	S/T	STE11	Please inquire.			
MAP3K7 (TAK1)	mitogen-activated protein kinase kinase kinase 7	NM_145333; NM_003188	TAK1	S/T	MLK	Please inquire.			
MAP3K8 (Tpl2, COT)	mitogen-activated protein kinase kinase kinase 8	NM_005204	COT	S/T	STE-Unique	CSKS-AQT0742B CSKS-AQT0742K	2242.7	Carna (07-301)	VS
MAP3K9 (MLK1)	mitogen-activated protein kinase kinase kinase 9	NM_033141	MLK1	S/T	MLK	CSKS-AQT0645B CSKS-AQT0645K	2778.3	Carna (09-115)	VS
MAP3K10 (MLK2)	mitogen-activated protein kinase kinase kinase 10	NM_002446	MLK2	S/T	MLK	Please inquire.			
MAP3K11 (MLK3)	mitogen-activated protein kinase kinase kinase 11	NM_002419	MLK3	S/T	MLK	CSKS-AQT0646B CSKS-AQT0646K	2769.3	Carna (09-017)	S
MAP3K12 (DLK)	mitogen-activated protein kinase kinase kinase 12	NM_006301	DLK	S/T	MLK	Please inquire.			
MAP3K13 (LZK)	mitogen-activated protein kinase kinase kinase 13	NM_004721	LZK	S/T	MLK	Please inquire.			
MAP3K14 (NIK)	mitogen-activated protein kinase kinase kinase 14	NM_003954	NIK	S/T	STE-Unique	Please inquire.			
MAP3K19 (YSK4)	mitogen-activated protein kinase kinase kinase 19	NM_025052	YSK4	S/T	STE11	CSKS-AQT0742B CSKS-AQT0742K	2242.7	SignalChem (Y06-11G)	VS
MAP3K20 (MLK7, ZAK)	mitogen-activated protein kinase kinase kinase 20	NM_016653	ZAK	S/T	MLK	CSKS-AQT0742B CSKS-AQT0742K	2242.7	Carna (09-120)	M
MAP3K21 (MLK4)	mitogen-activated protein kinase kinase kinase 21	NM_032435	MLK4	S/T	MLK	Please inquire.			
MAP4K1 (HPK1)	mitogen-activated protein kinase kinase kinase kinase 1	NM_007181	HPK1	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Thermo (PV6355)	VS
MAP4K2 (GCK)	mitogen-activated protein kinase kinase kinase kinase 2	NM_004579	GCK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	SignalChem (M24-10G)	VS
MAP4K3 (GLK, KHS2)	mitogen-activated protein kinase kinase kinase kinase 3	NM_003618	KHS2	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	SignalChem (M25-11G)	S
MAP4K4 (HGK, ZC1)	mitogen-activated protein kinase kinase kinase kinase 4	NM_004834	ZC1/HGK	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	Carna (07-137)	VS
MAP4K5 (KHS1)	mitogen-activated protein kinase kinase kinase kinase 5	NM_006575	KHS1	S/T	STE20	CSKS-AQT0178B CSKS-AQT0178K	1434.7	SignalChem (M27-10G)	VS
MAPK1 (ERK2)	mitogen-activated protein kinase 1	NM_002745	ERK2	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490K	2089.4	Carna (04-143)	VS
MAPK3 (ERK1)	mitogen-activated protein kinase 3	NM_002746	Erk1	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490K	2089.4	Carna (04-142)	VS
MAPK6 (ERK3)	mitogen-activated protein kinase 6	NM_002748	Erk3	S/T	MAPK	Please inquire.			
MAPK7 (ERK5)	mitogen-activated protein kinase 7	NM_002749	Erk5	S/T	MAPK	CSKS-AQT0373B CSKS-AQT0373K	3610.3	Carna (04-146)	VS
MAPK8 (JNK1)	mitogen-activated protein kinase 8	NM_002750	JNK1	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-163)	VS
MAPK9 (JNK2)	mitogen-activated protein kinase 9	NM_002752	JNK2	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-164)	VS
MAPK10 (JNK3)	mitogen-activated protein kinase 10	NM_002753	JNK3	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-150)	VS
MAPK11 (p38β)	mitogen-activated protein kinase 11	NM_002751	p38b	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490K	2089.4	Carna (04-153)	VS
MAPK12 (p38γ)	mitogen-activated protein kinase 12	NM_002969	p38g	S/T	MAPK	CSKS-AQT0652B CSKS-AQT0652K	2064.4	Carna (04-155)	VS
MAPK13 (p38δ)	mitogen-activated protein kinase 13	NM_002754	p38d	S/T	MAPK	CSKS-AQT0652B CSKS-AQT0652K	2064.4	Carna (04-154)	VS



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MAPK14 (p38α)	mitogen-activated protein kinase 14	NM_001315	p38a	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490K	2089.4	Carna (04-152)	VS
MAPK15 (ERK7)	mitogen-activated protein kinase 15	NM_139021	Erk7	S/T	MAPK	Please inquire.			
MAPKAPK2 (MK2)	MAPK activated protein kinase 2	NM_004759	MAPKAPK2	S/T	MAPKAPK	CSKS-AQT0426B CSKS-AQT0426K	1798.1	Carna (02-142)	VS
MAPKAPK3 (MK3)	MAPK activated protein kinase 3	NM_004635	MAPKAPK3	S/T	MAPKAPK	CSKS-AQT0425B CSKS-AQT0425K	2143.5	Carna (02-143)	VS
MAPKAPK5 (MK5)	MAPK activated protein kinase 5	NM_003668	MAPKAPK5	S/T	MAPKAPK	CSKS-AQT0426B CSKS-AQT0426K	1798.1	Carna (02-144)	S
MARK1	microtubule affinity regulating kinase 1	NM_018650	MARK1	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-120)	VS
MARK2	microtubule affinity regulating kinase 2	NM_004954	MARK2	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-121)	VS
MARK3	microtubule affinity regulating kinase 3	NM_002376	MARK3	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-122)	VS
MARK4	microtubule affinity regulating kinase 4	NM_031417	MARK4	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-123)	VS
MAST3	microtubule associated serine/threonine kinase 3	NM_015016	MAST3	S/T	MAST	Please inquire.			
MASTL	microtubule associated serine/threonine kinase-like	NM_032844	MASTL	S/T	MAST	CSKS-AQT0693B CSKS-AQT0693K	2771.2	SignalChem (M72-10G)	S
MATK (CTK)	megakaryocyte-associated tyrosine-protein kinase	NM_139355	MATK	Y	Csk	Please inquire.			
MELK	maternal embryonic leucine zipper kinase	NM_014791	MELK	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K	1798.1	Carna (02-124)	VS
MERTK (MER)	MER proto-oncogene, tyrosine kinase	NM_006343	MER	Y	Axl	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-108)	VS
MET (c-MET, HGFR)	MET proto-oncogene, receptor tyrosine kinase	NM_000245	MET	Y	Met	CSKS-AQT0702B CSKS-AQT0702K	1367.6	Carna (08-151)	VS
MET (Y1230H)	MET proto-oncogene, receptor tyrosine kinase	NM_000245	MET	Y	Met	CSKS-AQT0658B CSKS-AQT0658K	1367.6	Carna (08-178)	VS
MINK1 (ZC3)	misshapen-like kinase 1	NM_015716	ZC3/MINK	S/T	STE20	CSKS-AQT0183B CSKS-AQT0183K	1354.7	SignalChem (M53-11G)	VS
MKNK1 (MNK1)	MAPK interacting serine/threonine kinase 1	NM_003684	MNK1	S/T	MAPKAPK	CSKS-AQT0414B CSKS-AQT0414K	1398.7	Carna (02-145)	VS
MKNK2 (MNK2)	MAPK interacting serine/threonine kinase 2	NM_017572	MNK2	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701K	1692.0	Carna (02-146)	VS
MST1R (RON)	macrophage stimulating 1 receptor	NM_016542	RON	Y	Met	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-152)	VS
MTOR (FRAP)	mechanistic target of rapamycin kinase	NP_004949	FRAP	S/T	PIKK	Please inquire.			
MUSK	muscle associated receptor tyrosine kinase	NM_005592	MUSK	Y	Musk	CSKS-AQT0031B CSKS-AQT00031K	1987.4	Carna (08-153)	VS
MYLK (MLCK)	myosin light chain kinase	NM_053025	smMLCK	S/T	MLCK	CSKS-AQT0151B CSKS-AQT0151K-1	2342.5	SignalChem (M62-11G)	S <sup>1</sup>
MYLK2	myosin light chain kinase 2	NM_033118	skMLCK	S/T	MLCK	CSKS-AQT0517B CSKS-AQT0517K-1	2413.8	SignalChem (M63-10H)	VS <sup>1</sup>
MYLK3 (caMLCK)	myosin light chain kinase 3	NM_182493	caMLCK	S/T	MLCK	Please inquire.			
MYLK4 (SgK085)	myosin light chain kinase family member 4	NM_001012418	SgK085	S/T	MLCK	Please inquire.			
MYO3A	myosin IIIA	NM_017433	MYO3A	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	SignalChem (M65-11G)	S
MYO3B	myosin IIIB	NM_138995	MYO3B	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	SignalChem (M66-11G)	M
NEK1	NIMA related kinase 1	NM_012224	NEK1	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418K	1450.8	Carna (05-123)	VS
NEK2	NIMA related kinase 2	NM_002497	NEK2	S/T	NEK	CSKS-AQT0415B CSKS-AQT0415K	2724.1	Carna (05-226)	VS
NEK3	NIMA related kinase 3	NM_002498	NEK3	S/T	NEK	CSKS-AQT0415B CSKS-AQT0415K	2724.1	Carna (05-127)	M
NEK4	NIMA related kinase 4	NM_003157	NEK4	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418K	1450.8	Carna (05-128)	S
NEK5	NIMA related kinase 5	XM_292160	NEK5	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418K	1450.8	SignalChem (N07-11G)	VS
NEK6	NIMA related kinase 6	NM_014397	NEK6	S/T	NEK	CSKS-AQT0688B CSKS-AQT0688K	2688.0	Carna (05-130)	S
NEK7	NIMA related kinase 7	NM_133494	NEK7	S/T	NEK	CSKS-AQT0887B CSKS-AQT0887K	2567.8	Carna (05-131)	S
NEK8	NIMA related kinase 8	NM_017810	NEK8	S/T	NEK	Please inquire.			

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NEK9	NIMA related kinase 9	NM_033116	NEK9	S/T	NEK	CSKS-AQT0415B CSKS-AQT0415K	2724.1	Carna (05-133)	VS
NEK10	NIMA related kinase 10	NM_152534	NEK10	S/T	NEK	CSKS-AQT0415B CSKS-AQT0415K	2724.1	SignalChem (N12-11G)	M
NEK11	NIMA related kinase 11	NM_002497	NEK11	S/T	NEK	Please inquire.			
NIM1 (NIM1K)	NIM1 serine/threonine protein kinase	NM_153361	NIM1	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694K	1466.8	SignalChem (N14-10G)	S
NLK (LAK1)	nemo like kinase	NM_016231	NLK	S/T	MAPK	CSKS-AQT0374B CSKS-AQT0374K	3570.3	Carna (04-151)	S
NTRK1 (TRKA)	neurotrophic receptor tyrosine kinase 1	NM_002529	TRKA	Y	Trk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-186)	VS
NTRK2 (TRKB)	neurotrophic receptor tyrosine kinase 2	NM_006180	TRKB	Y	Trk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-187)	VS
NTRK3 (TRKC)	neurotrophic receptor tyrosine kinase 3	NM_002530	TRKC	Y	Trk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-197)	VS
NUAK1 (ARK5)	NUAK family kinase 1	NM_014840	NuaK1	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-126)	VS
NUAK2 (SNARK)	NUAK family kinase 2	NM_030952	NuaK2	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393K	2582.0	Carna (02-127)	VS
PAK1	p21 (RAC1) activated kinase 1	NM_002576	PAK1	S/T	STE20	CSKS-AQT0838B CSKS-AQT0838K	1424.6	Carna (07-123)	S
PAK2	p21 (RAC1) activated kinase 2	NM_002577	PAK2	S/T	STE20	CSKS-AQT0838B CSKS-AQT0838K	1424.6	Carna (07-124)	VS
PAK3	p21 (RAC1) activated kinase 3	NM_002578	PAK3	S/T	STE20	CSKS-AQT0838B CSKS-AQT0838K	1424.6	Carna (07-125)	S
PAK4	p21 (RAC1) activated kinase 4	NM_005884	PAK4	S/T	STE20	CSKS-AQT0839B CSKS-AQT0839K	1521.7	INVT (PV4212)	S
PAK5 (PAK7)	p21 (RAC1) activated kinase 5	NM_020341	PAK5	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840K	1537.8	SignalChem (P07-10G)	M
PAK6	p21 (RAC1) activated kinase 6	NM_020168	PAK6	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840K	1537.8	Carna (07-128)	M
PASK	PAS domain containing serine/threonine kinase	NM_015148	PASK	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna(02-128)	VS
PBK (TOPK)	PDZ binding kinase	NM_018492	PBK	S/T	TOPK	CSKS-AQT0767B CSKS-AQT0767K	2558.9	Invitrogen (PV4130)	VS
PDGFRA (PDGFR $\alpha$ )	platelet derived growth factor receptor alpha	NM_006206	PDGFR $\alpha$	Y	PDGFR	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-157)	VS
PDGFRB (PDGFR $\beta$ )	platelet derived growth factor receptor beta	NM_002609	PDGFR $\beta$	Y	PDGFR	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-158)	VS
PDK1 (PDHK1)	pyruvate dehydrogenase kinase 1	NM_002610; NM_002613	PDHK1	S/T	PDHK	CSKS-AQT0872B CSKS-AQT0872K-3	2750.0	SignalChem (P57-10G)	M <sup>3</sup>
PDK2 (PDHK2)	pyruvate dehydrogenase kinase 2	NM_002611	PDHK2	S/T	PDHK	CSKS-AQT0896B CSKS-AQT0896K-3	2347.6	SignalChem (P58-10G)	M <sup>3</sup>
PDK3 (PDHK3)	pyruvate dehydrogenase kinase 3	NM_005391	PDHK3	S/T	PDHK	CSKS-AQT0872B CSKS-AQT0872K-3	2750.0	SignalChem (P59-10G)	M <sup>3</sup>
PDK4 (PDHK4)	pyruvate dehydrogenase kinase 4	NM_002612	PDHK4	S/T	PDHK	CSKS-AQT0872B CSKS-AQT0872K-3	2750.0	SignalChem (P60-10G)	S <sup>3</sup>
PDPK1 (PDK1)	3-phosphoinositide dependent protein kinase 1	NM_002610; NM_002613	PDHK1	S/T	PDHK	CSKS-AQT0126B CSKS-AQT0126K	1563.8	SignalChem (P14-10H)	VS
PHKG1	phosphorylase kinase catalytic subunit gamma 1	NM_006213	PHKg1	S/T	PHK	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-152)	S <sup>1</sup>
PHKG2	phosphorylase kinase catalytic subunit gamma 2	NM_000294	PHKg2	S/T	PHK	CSKS-AQT0426B CSKS-AQT0426K-1	1798.1	Carna (02-153)	S <sup>1</sup>
PIM1	Pim-1 proto-oncogene, serine/threonine kinase	NM_002648	PIM1	S/T	PIM	CSKS-AQT0474B CSKS-AQT0474K	1331.6	Carna (02-054)	VS
PIM2	Pim-2 proto-oncogene, serine/threonine kinase	NM_006875	PIM2	S/T	PIM	CSKS-AQT0474B CSKS-AQT0474K	1331.6	Carna (02-155)	VS
PIM3	Pim-3 proto-oncogene, serine/threonine kinase	NM_001001852.2	PIM3	S/T	PIM	CSKS-AQT0474B CSKS-AQT0474K	1331.6	Carna (02-156)	VS
PINK1 (PINK)	PTEN induced kinase 1	NM_032409	PINK1	S/T	NKF2	CSKS-AQT0686B CSKS-AQT0686K	2689.0	Boston Bio (AP-182)	S
PKMYT1 (MYT1)	Protein kinase, membrane associated tyrosine/threonine 1	NP_004194	MYT1	S/T	WEE	Please inquire.			
PKN1	protein kinase N1	NM_002741	PKN1	S/T	PKN	CSKS-AQT0462B CSKS-AQT0462K	1648.0	Carna (01-144)	VS
PKN2	protein kinase N2	NM_006256	PKN2	S/T	PKN	CSKS-AQT0426B CSKS-AQT0426K	1798.1	Carna (01-145)	VS
PKN3	protein kinase N3	NM_013355	PKN3	S/T	PKN	CSKS-AQT0509B CSKS-AQT0509K	2067.4	Carna (01-146)	S
PLK1	polo like kinase 1	NM_005030	PLK1	S/T	PLK	CSKS-AQT0887B CSKS-AQT0887K	2567.8	INVT (PV3501)	S

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PLK2	polo like kinase 2	NM_006622	PLK2	S/T	PLK	Please inquire.			
PLK3	polo like kinase 3	NM_004073	PLK3	S/T	PLK	CSKS-AQT0887B CSKS-AQT0887K	2567.8	INVT (PV3812)	VS
PLK4	polo like kinase 4	NM_014264	PLK4	S/T	PLK	CSKS-AQT0898B CSKS-AQT0898K	2565.0	INVT (PV6394)	VS
PNCK (CAMK1 $\beta$ )	pregnancy up-regulated nonubiquitous CaM kinase	NM_001039582	CaMK1b	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420K-1	1821.2	Carna (02-105)	VS <sup>1</sup>
PRKAA1-B1-G1 (AMPK $\alpha$ 1 $\beta$ 1y1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	Carna (02-113)	VS <sup>4</sup>
PRKAA1-B1-G2 (AMPK $\alpha$ 1 $\beta$ 1y2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P55-10G)	VS <sup>4</sup>
PRKAA1-B1-G3 (AMPK $\alpha$ 1 $\beta$ 1y3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P56-10H)	VS <sup>4</sup>
PRKAA1-B2-G1 (AMPK $\alpha$ 1 $\beta$ 2y1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	Carna (02-147)	VS <sup>4</sup>
PRKAA1-B2-G2 (AMPK $\alpha$ 1 $\beta$ 2y2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P45-10G)	VS <sup>4</sup>
PRKAA1-B2-G3 (AMPK $\alpha$ 1 $\beta$ 2y3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKa1	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P83-10G)	VS <sup>4</sup>
PRKAA2-B1-G1 (AMPK $\alpha$ 2 $\beta$ 1y1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	Carna (02-114)	VS <sup>4</sup>
PRKAA2-B1-G2 (AMPK $\alpha$ 2 $\beta$ 1y2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P84-10GH)	VS <sup>4</sup>
PRKAA2-B1-G3 (AMPK $\alpha$ 2 $\beta$ 1y3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P85-10GH)	VS <sup>4</sup>
PRKAA2-B2-G1 (AMPK $\alpha$ 2 $\beta$ 2y1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	Carna (02-148)	VS <sup>4</sup>
PRKAA2-B2-G2 (AMPK $\alpha$ 2 $\beta$ 2y2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P54-10H)	VS <sup>4</sup>
PRKAA2-B2-G3 (AMPK $\alpha$ 2 $\beta$ 2y3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKa2	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K-4	1798.1	SignalChem (P46-10GH)	S <sup>4</sup>
PRKACA (PKAC $\alpha$ )	protein kinase cAMP-activated catalytic subunit alpha	NM_002730	PKAC $\alpha$	S/T	PKA	CSKS-AQT0458B CSKS-AQT0458K	1123.4	Carna (01-127)	VS
PRKACB (PKAC $\beta$ )	protein kinase cAMP-activated catalytic subunit beta	NM_002731	PKAC $\beta$	S/T	PKA	CSKS-AQT0458B CSKS-AQT0458K	1123.4	Carna (01-128)	VS
PRKACG (PKAC $\gamma$ , PKAC $\gamma$ )	protein kinase cAMP-activated catalytic subunit gamma	NM_002732	PKAC $\gamma$	S/T	PKA	CSKS-AQT0231B CSKS-AQT0231K	1370.6	SignalChem (P53-10G)	VS
PRKCA (PKC $\alpha$ )	protein kinase C alpha	NM_002737	PKC $\alpha$	S/T	PKC	CSKS-AQT0316B CSKS-AQT0316K-5	1544.9	Carna (01-133)	VS <sup>5</sup>
PRKCB1 (PKC $\beta$ 1)	protein kinase C beta	NM_002738	PKC $\beta$	S/T	PKC	CSKS-AQT0316B CSKS-AQT0316K-5	1544.9	Carna (01-134)	VS <sup>5</sup>
PRKCB2 (PKC $\beta$ 2)	protein kinase C beta	X07109	PKC $\beta$	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462K-5	1648.0	Carna (01-165)	VS <sup>5</sup>
PRKCD (PKC $\delta$ )	protein kinase C delta	NM_006254	PKC $\delta$	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462K-5	1648.0	Carna (01-135)	VS <sup>5</sup>
PRKCE (PKC $\epsilon$ )	protein kinase C epsilon	NM_005400	PKC $\epsilon$	S/T	PKC	CSKS-AQT0465B CSKS-AQT0465K-5	1618.9	Carna (01-136)	VS <sup>5</sup>
PRKCG (PKC $\gamma$ )	protein kinase C gamma	NM_002739	PKC $\gamma$	S/T	PKC	CSKS-AQT0316B CSKS-AQT0316K-5	1544.9	Carna (01-137)	VS <sup>5</sup>
PRKCH (PKC $\eta$ )	protein kinase C eta	NM_006255	PKC $\eta$	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462K-5	1648.0	Carna (01-138)	VS <sup>5</sup>
PRKCI (PKC $\iota$ )	protein kinase C iota	NM_002740	PKC $\iota$	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462K-5	1648.0	Carna (01-139)	VS <sup>5</sup>
PRKCQ (PKC $\theta$ )	protein kinase C theta	NM_006257	PKC $\theta$	S/T	PKC	CSKS-AQT0465B CSKS-AQT0465K-5	1618.9	Carna (01-140)	VS <sup>5</sup>
PRKCZ (PKC $\zeta$ )	protein kinase C zeta	NM_002744	PKC $\zeta$	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462K-5	1648.0	Carna (01-141)	VS <sup>5</sup>

HGNC (Common) Name	HGNC Approved Full Name	GenBank Acc.No.	Manning Name	Ser (S) Thr (T) Tyr (Y)	Family	Sensor Peptide Product Number (Bulk, Kit)	Sensor Peptide MW (g/mol)	Enzyme Used in Sensor Peptide Development	Continuous Assay Strength*
PRKD1 (PKD1)	protein kinase D1	NM_002742	PKD1	S/T	PKD	CSKS-AQT0803B CSKS-AQT0803K	1969.3	Carna (02-157)	VS
PRKD2 (PKD2)	protein kinase D2	NM_016457	PKD2	S/T	PKD	CSKS-AQT0803B CSKS-AQT0803K	1969.3	Carna (02-158)	VS
PRKD3 (PKD3)	protein kinase D3	NM_005813	PKD3	S/T	PKD	CSKS-AQT0803B CSKS-AQT0803K	1969.3	Carna (02-159)	VS
PRKDC (DNA-PK)	protein kinase, DNA-activated, catalytic subunit	NM_006904	DNAPK	S/T	PIKK	CSKS-AQT0439B CSKS-AQT0439K-6	1934.0	Thermo (PV5866)	VS <sup>6</sup>
PRKG1 (PKG1, PGK)	protein kinase cGMP-dependent I	NM_006258	DNAPK	S/T	PIKK	CSKS-AQT0452B CSKS-AQT0452K-7	1525.8	Carna (01-142)	VS <sup>7</sup>
PRKG2 (PKG2, PGK2, CGK2)	protein kinase cGMP-dependent II	NM_006259	PKG2	S/T	PKG	CSKS-AQT0452B CSKS-AQT0452K-7	1525.8	Carna (01-143)	VS <sup>7</sup>
PRKX	protein kinase cAMP-dependent X-linked catalytic subunit	NM_005044	PRKX	S/T	PKA	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (01-130)	VS
PTK2 (FAK)	protein tyrosine kinase 2	NM_153831	FAK	Y	FAK	CSKS-AQT0061B CSKS-AQT0061K	2123.2	Carna (08-137)	S
PTK2B (PYK2)	protein tyrosine kinase 2 beta	NM_004103	PYK2	Y	FAK	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-138)	VS
PTK6 (BRK)	protein tyrosine kinase 6	NM_005975	BRK	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-165)	VS
RAF1 (Y340E/Y341E)	Raf-1 proto-oncogene, serine/threonine kinase	NM_002880	RAF1	S/T	RAF	CSKS-AQT0688B CSKS-AQT0688K	2688.0	SignalChem (R01-13G-10)	S
BCR RET (fusion)						CSKS-AQT0661B CSKS-AQT0661K	1381.6	SignalChem (R02-19EG)	VS
RET	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0661B CSKS-AQT0661K	1381.6	Carna (08-159)	VS
RET [G691S]	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0102B CSKS-AQT0102K	1381.6	Carna (08-522)	VS
RET [M918T]	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0102B CSKS-AQT0102K	1381.6	Carna (08-508)	VS
RET [S891A]	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0102B CSKS-AQT0102K	1381.6	Carna (08-523)	VS
RET [Y791F]	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0102B CSKS-AQT0102K	1381.6	Carna (08-521)	VS
RET:CCDC6 (CCDC6-RET)	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0102B CSKS-AQT0102K	1381.6	SignalChem (R02-19BG)	VS
RIPK1	receptor interacting serine/threonine kinase 1	NM_003840	RIPK1	S/T	RIPK	Please inquire.			
RIPK2	receptor interacting serine/threonine kinase 2	NM_003821	RIPK2	S/T	RIPK	CSKS-AQT0205B CSKS-AQT0205K-8	3110.6	SignalChem (R08-11G)	S <sup>8</sup>
RIPK3	receptor interacting serine/threonine kinase 3	NM_006871	RIPK3	S/T	RIPK	Please inquire.			
ROCK1	Rho associated coiled-coil containing protein kinase 1	NM_005406	ROCK1	S/T	DMPK	CSKS-AQT0839B CSKS-AQT0839K	1521.7	Carna (01-109)	S
ROCK2	Rho associated coiled-coil containing protein kinase 2	NM_004850	ROCK2	S/T	DMPK	CSKS-AQT0839B CSKS-AQT0839K	1521.7	Carna (01-110)	VS
ROS1 (ROS)	ROS proto-oncogene 1, receptor tyrosine kinase	NM_002944	ROS	Y	Sev	CSKS-AQT0661B CSKS-AQT0661K	1384.6	Carna (08-163)	VS
ROS1 [G2032R]	ROS proto-oncogene 1, receptor tyrosine kinase	NM_002944	ROS	Y	Sev	CSKS-AQT0101B CSKS-AQT0101K	1384.6	SignalChem (R14-12BG)	VS
RPS6KA1 (RSK1)	ribosomal protein S6 kinase A1	NM_002953	RSK3	S/T	RSK	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-149)	VS
RPS6KA2 (RSK3)	ribosomal protein S6 kinase A2	NM_021135	RSK1	S/T	RSK	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-151)	VS
RPS6KA3 (RSK2)	ribosomal protein S6 kinase A3	NM_004586	RSK2	S/T	RSK	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-150)	VS
RPS6KA4 (MSK2)	ribosomal protein S6 kinase A4	NM_003942	MSK2	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535K	1945.2	Carna (01-148)	M
RPS6KA5 (MSK1)	ribosomal protein S6 kinase A5	NM_004755	MSK1	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535K	1945.2	Carna (01-147)	VS
RPS6KA6 (RSK4)	ribosomal protein S6 kinase A6	NM_014496	RSK4	S/T	RSK	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-152)	VS
RPS6KB1 (p70S6K)	ribosomal protein S6 kinase B1	NM_003161	p70S6K	S/T	RSK	CSKS-AQT0231B CSKS-AQT0231K	1370.6	Carna (01-158)	VS
RPS6KB2 (p70S6KB)	ribosomal protein S6 kinase B2	NM_003952	p70S6Kb	S/T	RSK	CSKS-AQT0231B CSKS-AQT0231K	1370.6	SignalChem (R22-10G)	VS
SBK1 (SBK)	SH3 domain binding kinase 1	NM_001024401	SBK	S/T	NKF1	CSKS-AQT0694B CSKS-AQT0694K	1466.8	SignalChem (S56-10G)	M
SGK1 (SGK)	serum/glucocorticoid regulated kinase 1	NM_005627	SGK	S/T	SGK	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-158)	VS

HGNC (Common) Name	HGNC Approved Full Name	GenBank Acc.No.	Manning Name	Ser (S) Thr (T) Tyr (Y)	Family	Sensor Peptide Product Number (Bulk, Kit)	Sensor Peptide MW (g/mol)	Enzyme Used in Sensor Peptide Development	Continuous Assay Strength*
SGK2	serum/glucocorticoid regulated kinase 2	NM_016276	SGK2	S/T	SGK	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-159)	VS
SGK3	serum/glucocorticoid regulated kinase family member 3	NM_013257	SGK3	S/T	SGK	CSKS-AQT0536B CSKS-AQT0536K	1469.7	Carna (01-160)	VS
SIK1 (SIK)	salt inducible kinase 1	NM_173354	SIK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508K	2040.4	Carna (02-131)	VS
SIK2 (QIK)	salt inducible kinase 2	NM_015191	QIK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508K	2040.4	Carna (02-129)	VS
SIK3 (QSK)	salt inducible kinase 3	BC128510.1	QSK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508K	2040.4	INVT (PV6403)	VS
SLK	STE20 like kinase	NM_014720	SLK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Carna (07-129)	VS
SNRK	SNF related kinase	NM_017719	SNRK	S/T	CAMKL	CSKS-AQT0426B CSKS-AQT0426K	1798.1	SignalChem (S16-10G)	S
SRC	SRC proto-oncogene, non-receptor tyrosine kinase	NM_005417	SRC	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-173)	VS
SRC N1	SRC proto-oncogene, non-receptor tyrosine kinase	NP_005408	SRC	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	INVT (P2904)	VS
SRMS (SRM)	SRC-related kinase lacking C-terminal regulatory tyrosine and N-terminal myristylation sites	NM_080823	SRM	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-174)	VS
SRPK1	SRSF protein kinase 1	NM_003137	SRPK1	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	SignalChem (S21-10G)	VS
SRPK2	SRSF protein kinase 2	NM_182692	SRPK2	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	Carna (04-161)	VS
SRPK3 (MSSK1)	SRSF protein kinase 3	NM_014370	MSSK1	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360K	2741.0	SignalChem (S41-10G)	S
STK3 (MST2)	serine/threonine kinase 3	NM_006281	MST2	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	Carna (07-117)	VS
STK4 (MST1)	serine/threonine kinase 4	NM_006282	MST1	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	SignalChem (S25-10G)	VS
STK10 (LOK)	serine/threonine kinase 10	NM_005990	LOK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Carna (07-315)	VS
STK11 (LKB1, AMPKK)	serine/threonine kinase 11	NM_000455	LKB1	S/T	CAMKL	CSKS-AQT0728B CSKS-AQT0728K	2563.0	Carna (02-119)	M
STK16 (MPSK1, PKL12, TSF1)	serine/threonine kinase 16	NM_001008910	MPSK1	S/T	NAK	Please inquire.			
STK17A (DRAK1)	serine/threonine kinase 17a	NM_004760	DRAK1	S/T	DAPK	CSKS-AQT0173B CSKS-AQT0173K	2438.9	Carna (02-137)	S
STK17B (DRAK2)	serine/threonine kinase 17b	NM_004226	DRAK2	S/T	DAPK	CSKS-AQT0174B CSKS-AQT0174K	2468.9	SignalChem (S34-10G)	VS
STK24 (MST3)	serine/threonine kinase 24	NM_003576	MST3	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Carna (07-118)	VS
STK25 (YSK1)	serine/threonine kinase 25	NM_006374	YSK1	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Carna (07-136)	VS
STK26 (MST4)	serine/threonine kinase 26	NM_016542	MST4	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Carna (07-119)	VS
STK33	serine/threonine kinase 33	NM_030906	STK33	S/T	CAMK-Unique	Please inquire.			
STK38 (NDR1)	serine/threonine kinase 38	NM_007271	NDR1	S/T	NDR	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-125)	VS
STK38L (NDR2)	serine/threonine kinase 38 like	NM_015000	NDR2	S/T	NDR	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-126)	VS
SYK	spleen associated tyrosine kinase	NM_003177	SYK	Y	Syk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-176)	VS
TAOK1 (TAO1)	TAO kinase 1	NM_020791	TAO1	S/T	STE20	CSKS-AQT0253B CSKS-AQT0253K	1443.8	SignalChem (T24-11G)	S
TAOK2 (TAO2)	TAO kinase 2	NM_016151	TAO2	S/T	STE20	CSKS-AQT0253B CSKS-AQT0253K	1443.8	Carna (07-133)	S
TAOK3 (TAO3)	TAO kinase 3	NM_016281	TAO3	S/T	STE20	CSKS-AQT0253B CSKS-AQT0253K	1443.8	SignalChem (T26-11G)	S
TBK1	TANK binding kinase 1	NM_013254	TBK1	S/T	IKK	CSKS-AQT0897B CSKS-AQT0897K	2573.9	Carna (05-115)	VS
TEC	tec protein tyrosine kinase	NM_003215	TEC	Y	Tec	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-182)	VS
TEK (TIE2)	TEK receptor tyrosine kinase	NM_000459	TIE2	Y	Tie	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-185)	VS
TESK2	testis associated actin remodelling kinase 2	NM_007170	TESK2	S/T	LISK	Please inquire.			
TLK1	tousled like kinase 1	NM_012290	TLK1	S/T	TLK	CSKS-AQT0686B CSKS-AQT0686K	2689.0	Carna (05-166)	S



HGNC (Common) Name	HGNC Approved Full Name	GenBank Acc.No.	Manning Name	Ser (S) Thr (T) Tyr (Y)	Family	Sensor Peptide Product Number (Bulk, Kit)	Sensor Peptide MW (g/mol)	Enzyme Used in Sensor Peptide Development	Continuous Assay Strength*
TLK2	tousled like kinase 2	NM_006852	TLK2	S/T	TLK	Please inquire.			
TNIK (ZC2)	TRAF2 and NCK interacting kinase	NM_015028	ZC2/TNIK	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	Carna (07-138)	VS
TNK1	tyrosine kinase non receptor 1	NM_003985.4	TNK1	Y	Ack	CSKS-AQT0794B CSKS-AQT0794K	2339.5	SignalChem (T12-11G)	S
TNK2 (ACK)	tyrosine kinase non receptor 2	NM_005781	ACK	Y	Ack	CSKS-AQT0515B CSKS-AQT0515K	1101.3	Invitrogen(PV4807)	VS
TRPM7 (CHAK1)	transient receptor potential cation channel subfamily M member 7	NM_017672	ChaK1	S/T	Alpha	CSKS-AQT0349B CSKS-AQT0349K	2673.2	Carna (10-111)	VS
TSSK1B (TSSK1)	testis specific serine kinase 1B	NM_032028	TSSK1	S/T	TSSK	CSKS-AQT0123B CSKS-AQT0123K	3012.5	Carna (02-364)	S
TSSK2	testis specific serine kinase 2	NM_053006	TSSK2	S/T	TSSK	CSKS-AQT0426B CSKS-AQT0426K	1798.1	SignalChem (S38-10G)	VS
TSSK3	testis specific serine kinase 3	NM_052841	TSSK3	S/T	TSSK	CSKS-AQT0426B CSKS-AQT0426K	1798.1	Carna (02-166)	VS
TSSK6 (SSTK)	testis specific serine kinase 6	NM_032037	SSTK	S/T	TSSK	Please inquire.			
TTBK1	tau tubulin kinase 1	NM_032538	TTBK1	S/T	TTBK	CSKS-AQT0686B CSKS-AQT0686K	2689.0	SignalChem (T17-11G)	VS
TTBK2	tau tubulin kinase 2	NM_173500	TTBK2	S/T	TTBK	CSKS-AQT0686B CSKS-AQT0686K	2689.0	Carna (03-109)	VS
TTK	TTK protein kinase	NM_003318	TTK	S/T	TTK	CSKS-AQT0897B CSKS-AQT0897K	2573.9	Carna (05-169)	M
TXK	TXK tyrosine kinase	NM_003328	TXK	Y	Tec	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-183)	VS
TYK2 [JH1]	tyrosine kinase 2	NM_003331	TYK2	Y	Jak	CSKS-AQT0663B CSKS-AQT0663K	1341.6	Carna (08-147)	S
TYK2 [JH1-JH2]	tyrosine kinase 2	NM_003331	TYK2	Y	Jak	Please inquire.			
TYRO3	TYRO3 protein tyrosine kinase	NM_006293	TYRO3	Y	Axl	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-109)	VS
ULK1	unc-51 like autophagy activating kinase 1	NM_003565	ULK1	S/T	ULK	CSKS-AQT0332B CSKS-AQT0332K	2827.3	SignalChem (U01-11G)	VS
ULK2	unc-51 like autophagy activating kinase 2	NM_014683	ULK2	S/T	ULK	CSKS-AQT0332B CSKS-AQT0332K	2827.3	SignalChem (U02-11G)	S
ULK3	unc-51 like autophagy activating kinase 3	NM_015518	ULK3	S/T	ULK	CSKS-AQT0686B CSKS-AQT0686K	2689.0	Carna (05-173)	S
VRK1	VRK serine/threonine kinase 1	NM_003384	VRK1	S/T	VRK	Please inquire.			
VRK2	VRK serine/threonine kinase 2	NM_006296	VRK2	S/T	VRK	Please inquire.			
WEE1	WEE1 G2 checkpoint kinase	NM_003390	WEE1	Dual Specificity	WEE	Please inquire.			
YES1 (YES)	YES proto-oncogene 1, Src family tyrosine kinase	NM_005433	YES	Y	Src	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-175)	VS
ZAP70	zeta chain of T cell receptor associated protein kinase 70	NM_001079	ZAP70	Y	Syk	CSKS-AQT0794B CSKS-AQT0794K	2339.5	Carna (08-177)	VS

Note: Substrate concentrations range from 10-15µM

Table 1.

Total Number of PhosphoSens Continuous FI Kinase Assays
Total Number of Assays: 459*

\*Please inquire if your target is not listed in the table above.

Table 2.

Definition of PhosphoSens Sensor Peptide Continuous Assay Strength		
Continuous (FI) Assay strength is defined by Initial Reaction Rate (RFU/pmole/min)*		
<u>Very Strong (VS)</u> >1,000	<u>Strong (S)</u> 300-999	<u>Medium (M)</u> 100-299

\*Targets listed as "Please Inquire." are routinely run in our Services, but do not meet our criteria for catalog sale. Please inquire.

Table 3.

General Kinase Assay Reaction Conditions*
10-15 $\mu$ M PhosphoSens Sensor Peptide
54 mM HEPES, pH 7.5
1 mM ATP (or adjusted as needed)
1.2 mM DTT
0.012% Brij-35
0.5% glycerol
0.22 mg/ml BSA
0.55 mM EGTA
10 mM MgCl <sub>2</sub>
<b>Any additional co-factors or additives (as indicated in Table 4.)</b>

\*Does not account for Enzyme Storage Buffer contributions

Table 4.

Co-factors or additives
1. (-) EGTA (+) 5 ng/ $\mu$ l CaM, 0.4 mM CaCl <sub>2</sub>
2. (+) Activated (1 $\mu$ M t-RNA)
3. (+) 10 mM KCl
4. (+) 1 mM AMP
5. (-) EGTA (+) 1.4mM PhosphatidylSerine, 38uM DiAcylGlycerol
6. (+) Activated (1X Cytiva DNA)
7. (+) 1 mM cGMP
8. (-) 10 mM MgCl <sub>2</sub> (+) 30 mM MgCl <sub>2</sub>
9. (+) 50 mM KCl
10. (-) DTT

Table 5.

General Kinase Assay Reaction Set-Up
<i>using a 384-well plate with 20 <math>\mu</math>L total volume in one well at 10 <math>\mu</math>M Sensor Peptide</i>
Add 2 $\mu$ L 100uM Sensor Peptide (CSKS-AQTxxxx)
Add 14 $\mu$ L Master Mix (with Enzyme Reaction Buffer, ATP, DTT, and EGTA)
5 minute preincubation of Reaction Mix (as prepared above) @ 30°C
Add 4 $\mu$ L Enzyme Dilution Buffer (EDB) (5x) or Enzyme dilutions (5x in EDB)
Put the plate in the reader at 30°C and measure kinetic fluorescent intensity (FI) reading (lExMax 360nm/lEmMax ~492 nm [485-498 nm]) for 240 minutes.

Table 6.

PhosphoSens Evaluation Kit Components - Continuous Assay Format				
Product Number	Component	Description	Volume	Storage
CSKS-AQTxxxxK*	PhosphoSens Substrate, 1 mM	PhosphoSens Sensor Peptide Substrate, 1 mM	35 $\mu$ L	-20°C or below
	ATP Solution, 100 mM	100 mM ATP in nuclease-free water	150 $\mu$ L	-20°C or below. Minimize repeated freeze/thaw cycles
	DTT Solution, 1 000 mM	1 000 mM DTT in nuclease-free water	150 $\mu$ L	-20°C or below. Minimize repeated freeze/thaw cycles
	Enzyme Reaction Buffer, 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl <sub>2</sub>	1,650 $\mu$ L	-20°C or below
	Enzyme DilutionBuffer, 5X	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL BSA	1,650 $\mu$ L	-20°C or below. Minimize repeated freeze/thaw cycles
	EGTA Solution, 550 mM	550 mM EGTA in 2000 mM NaOH	150 $\mu$ L	-20°C or below

\*PLEASE NOTE: Any kits with a number designation after 'K-' come with the necessary additives.

Table 7.

PhosphoSens Buffers and Reagents				
Product Number	Component	Description	Volume	Storage
AQT100XATP	ATP Solution, 100 mM	100 mM ATP in nuclease-free water	1.5mL	-20°C or below. Minimize repeated freeze/thaw cycles
AQT1000XDTT	DTT Solution, 1 000 mM	1 000 mM DTT in nuclease-free water	0.15mL	-20°C or below. Minimize repeated freeze/thaw cycles
AQT10XERB	Enzyme Reaction Buffer, 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl <sub>2</sub>	15mL	-20°C or below
AQT1XEDB	Enzyme DilutionBuffer, 5X	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL BSA	35mL	-20°C or below. Minimize repeated freeze/thaw cycles
AQT1000XEGTA	EGTA Solution, 550 mM	550 mM EGTA in 2000 mM NaOH	0.15mL	-20°C or below