

PhosphoSens Sensor Peptides for Red-Shift Time Resolved Fluorescence 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 ~2,00 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).

Kits (*PN: CSKS-AQTxxxxKR*): Designed for streamlined technology evaluation. Each 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
*See tables 2-6 below for reaction conditions, reaction set up, and Red-Shift assay components.								
ABL1	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0030B CSKS-AQT0030KR	1987.4	Carna (08-101)
ABL1 [E255K]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		Carna (08-094)
ABL1 [E255V]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		SignalChem (A03-12HH)
ABL1 [H396P]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		SignalChem (A03-12LG)
ABL1 [O252H]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		SignalChem (A03-12FG)
ABL1 [T315I]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		Carna (08-093)
ABL1 [Y253F]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		SignalChem (A03-12EG)
ABL1 [Y253H]	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	Please inquire.		SignalChem (A03-12GH)
ABL2 (ARG)	ABL proto-oncogene 2, non-receptor tyrosine kinase	NM_005157	ARG	Y	Abl	CSKS-AQT0030B CSKS-AQT0030KR	1987.4	Carna (08-102)
AKT1 (PKB)	AKT Serine/Threonine Kinase 1	NM_005163	AKT1	S/T	Akt	CSKS-AQT0569B CSKS-AQT0569KR	1365.6	Carna (01-101)
AKT1 (Full Length)	AKT Serine/Threonine Kinase 1	NM_005163	AKT1	S/T	Akt	Please inquire.		SignalChem(A16-10H)
AKT2 (PKBb)	AKT Serine/Threonine Kinase 2	NM_001626	AKT2	S/T	Akt	CSKS-AQT0232B CSKS-AQT0232KR	1666.0	Carna (01-102)
AKT3 (PKBg)	AKT Serine/Threonine Kinase 3	NM_005465	AKT3	S/T	Akt	CSKS-AQT0569B CSKS-AQT0569KR	1365.6	Carna (01-103)
ALK	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-518)
ALK [C1156Y]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-530)
ALK [F1174L]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-519)
ALK [G1202R]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-544)
ALK [G1269A]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-537)
ALK [L1196M/G1202R]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna(08-556)
ALK [L1196M]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-529)
ALK [R1275Q]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-520)
ALK [T1151-L1152 INS T]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-539)
ALK:NPM1 (NPM1-ALK)	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	Please inquire.		Carna (08-517)
AP2 (AAK1)	AP2 associated kinase 1	NM_014911	AAK1	S/T	NAK	Please inquire.		Please inquire.
AURKA (AURA)	aurora kinase A	NM_003600	AurA	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186KR	1398.7	Carna (05-101)
AURKB (AURB)	aurora kinase B	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186KR	1398.7	Carna (05-102)
AURKB (AURB) [G160L]	aurora kinase B	NM_004217	AurB	S/T	Aur	Please inquire.		SignalChem (A31-10BG)
AURKC (AURC)	aurora kinase C	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186KR	1398.7	Carna (05-103)
AXL	AXL receptor tyrosine kinase	NM_001699	AXL	Y	Axl	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-107)
BCKDK	branched chain ketoacid dehydrogenase kinase	NM_005881	BCKDK	S/T	PDHK	Please inquire.		Please inquire.
BLK	BLK proto-oncogene, Src family tyrosine kinase	NM_001715	BLK	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-164)
BMP2K (BIKE)	BMP2 inducible kinase	NM_017593	BIKE	S/T	NAK	Please inquire.		Please inquire.
BMX	BMX non-receptor tyrosine kinase	NM_001721	BMX	Y	Tec	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-179)

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BRAF (BRAFI, RAFB1)	B-Raf proto-oncogene, serine/threonine kinase	NP_004324.2	BRAF	S/T	RAF	Please inquire.		Please inquire.
BRAF, b-[V600E]	B-Raf proto-oncogene, serine/threonine kinase	NM_004333	BRAF	S/T	RAF	CSKS-AQT0682B CSKS-AQT0682KR	2715.0	INVT (PV3849)
BRSK1	BR serine/threonine kinase 1	NM_032430	BRSK1	S/T	CAMKL	CSKS-AQT0900B CSKS-AQT0900KR	1998.4	Carna (02-115)
BRSK2	BR serine/threonine kinase 2	NM_003957	BRSK2	S/T	CAMKL	CSKS-AQT0900B CSKS-AQT0900KR	1998.4	Carna (02-116)
BTK	Bruton tyrosine kinase	NM_000061	BTK	Y	Tec	CSKS-AQT0663B CSKS-AQT0663KR	1341.6	Carna (08-180)
BTK [C481S]	Bruton tyrosine kinase	NM_000061	BTK	Y	Tec	Please inquire.		Carna (08-547)
BUB1	BUB1 mitotic checkpoint serine/threonine kinase	NM_004336	BUB1	S/T	BUB	CSKS-AQT0349B CSKS-AQT0349KR	2673.2	Carna (05-187)
BUBR1/BUB1B	BUB1 mitotic checkpoint serine/threonine kinase B	NM_001211	BUBR1	S/T	BUB	Please inquire.		Carna (05-105)
CAMK1 (CAMK1a)	calcium/calmodulin dependent protein kinase I	NM_003656	CaMK1a	S/T	CAMK1	Please inquire.		Carna (02-104)
CAMK1D (CAMK16)	calcium/calmodulin dependent protein kinase ID	NM_020397	CaMK1d	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420KR-1	1821.2	SignalChem (C09-10G)
CAMK1G (CAMK1γ)	calcium/calmodulin dependent protein kinase IG	NM_020439	CaMK1g	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420KR-1	1821.2	SignalChem (C10-11G)
CAMK2A (CAMK2α)	calcium/calmodulin dependent protein kinase II alpha	NM_003656	CaMK2a	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425KR-1	2143.5	Carna (02-109)
CAMK2B (CAMK2β)	calcium/calmodulin dependent protein kinase II beta	NM_001220	CaMK2b	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425KR-1	2143.5	Carna (02-110)
CAMK2D (CAMK2δ)	calcium/calmodulin dependent protein kinase II delta	NM_001221	CaMK2d	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425KR-1	2143.5	Carna (02-111)
CAMK2G (CAMK2γ)	calcium/calmodulin dependent protein kinase II gamma	NM_001222	CaMK2g	S/T	CAMK2	CSKS-AQT0425B CSKS-AQT0425KR-1	2143.5	Carna (02-112)
CAMK4	calcium/calmodulin dependent protein kinase IV	NM_001744	CaMK4	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420KR-1	1821.2	Carna (02-108)
CAMKK1	calcium/calmodulin dependent protein kinase kinase 1	NM_006549	CaMKK2	S/T	CAMKK	Please inquire.		Carna (05-157)
CAMKK2	calcium/calmodulin dependent protein kinase kinase 2	NM_006549	CaMKK2	S/T	CAMKK	Please inquire.		Please inquire.
CDC42BPA (MRCKA)	CDC42 binding protein kinase alpha	NM_003607	MRCKa	S/T	DMPK	Please inquire.		Please inquire.
CDC42BPB (MRCKB)	CDC42 binding protein kinase beta	NM_006035	MRCKb	S/T	DMPK	Please inquire.		Please inquire.
CDC42BPG (DMPK2)	CDC42 binding protein kinase gamma	NM_017525	DMPK2	S/T	DMPK	CSKS-AQT0837B CSKS-AQT0837KR	1956.2	SignalChem (D17-11G)
CDC7/DBF4 (CDC7)	cell division cycle 7	NM_003503	CDC7	S/T	CDC7	Please inquire.		Please inquire.
CDK1 (CDC2)/CycA1	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	Please inquire.		SignalChem (C22-18BG)
CDK1 (CDC2)/CycA2	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297KR	1504.9	Carna (04-119)
CDK1/CycB1(CDC2)	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0297B CSKS-AQT0297KR	1504.9	Carna (04-102)
CDK1/CycE1	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0296B CSKS-AQT0296KR	1052.2	Proqinase (0134-0055-1)
CDK2/CycA1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.		SignalChem (C29-10BG)
CDK2/CycA2	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.		Carna (04-103)
CDK2/CycD1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.		Please inquire.
CDK2/CycE1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255KR	1449.8	Carna (04-165)
CDK2/CycE2	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.		SignalChem (C29-18BG)
CDK2/CycO	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	Please inquire.		Please inquire.
CDK3/CycE1	cyclin dependent kinase 3	NM_001258	CDK3	S/T	CDK	Please inquire.		Carna (04-104)
CDK3/CycE2	cyclin dependent kinase 3	NM_001258	CDK3	S/T	CDK	Please inquire.		SignalChem (C30-10BG)
CDK4 /CycD3	cyclin dependent kinase 4	NM_000075	CDK4	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	Carna (04-105)
CDK4/CycD1	cyclin dependent kinase 4	NM_001258	CDK3	S/T	CDK	Please inquire.		Please inquire.
CDK4/CycD2	cyclin dependent kinase 4	NM_000075	CDK4	S/T	CDK	Please inquire.		Proqinase (0142-0375-1)
CDK5/p25	cyclin dependent kinase 5	NM_004935	CDK5	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	Carna (04-106)
CDK5/p35	cyclin dependent kinase 5	NM_004935	CDK5	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255KR	1449.8	SignalChem (C33-10BG)
CDK6/CycD1	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	CSKS-AQT0258B CSKS-AQT0258KR	2506.9	Carna (04-114)
CDK6/CycD2	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	Please inquire.		Please inquire.
CDK6/CycD3	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	Carna (04-107)
CDK7/CycH/MAT1	cyclin dependent kinase 7	NM_001799	CDK7	S/T	CDK	CSKS-AQT0733B CSKS-AQT0733KR	3243.6	Carna (04-108)

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CDK7/CycH1	cyclin dependent kinase 7	NM_001799	CDK7	S/T	CDK	Please inquire.		Please inquire.
CDK9 (TAK) w/CycK	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	Please inquire.		Carna (04-111)
CDK9 (TAK) w/CycT1	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT0449B CSKS-AQT0449KR	2581.0	Carna (04-110)
CDK9 (TAK)/CycT2	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT0449B CSKS-AQT0449KR	2581.0	Carna (04-121)
CDK12 (CRK7)/CycK	cyclin dependent kinase 12	NM_016507.3	CRK7	S/T	CDK	Please inquire.		Please inquire.
CDK13 (CHED)/CycK	cyclin dependent kinase 13	NM_003718	CHED	S/T	CDK	Please inquire.		Please inquire.
CDK14/CycY	cyclin dependent kinase 14		CHED	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	SignalChem(P15-10G)
CDK15/CycB1	cyclin dependent kinase 15			S/T	CDK	Please inquire.		Please inquire.
CDK16/CycY	cyclin dependent kinase 16	NM_006201	PCTAIRE1	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	Carna(04-116)
CDK17 (PCTAIRE2)/CycY	cyclin dependent kinase 17	NM_002595	PCTAIRE2	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	SignalChem(P10-10G)
CDK17 (PCTAIRE2, PCTK2)/p35NCK	cyclin dependent kinase 17	NM_002595	PCTAIRE2	S/T	CDK	Please inquire.		Please inquire.
CDK18/CycY (PCTAIRE3)	cyclin dependent kinase 18	NM_002596	PCTAIRE3	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730KR	2578.0	SignalChem(P11-10G)
CDK19 (CDK11)/CycC	cyclin dependent kinase 19	NM_015076	CDK11	S/T	CDK	Please inquire.		Please inquire.
CDKL5	cyclin-dependent kinase-like 5	NM_003159	CDKL5	S/T	CDKL	Please inquire.		Please inquire.
CDPK1 (toxoplasma gondii)						Please inquire.		Academic Lab
CDPK3 (toxoplasma gondii)						Please inquire.		Academic Lab
CHEK1 (CHK1)	checkpoint kinase 1	NM_001274	CHK1	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694KR	1466.8	Carna (02-117)
CHEK2 (CHK2)	checkpoint kinase 2	NM_007194	CHK2	S/T	RAD53	CSKS-AQT0694B CSKS-AQT0694KR	1466.8	Carna (02-162)
CHUK (IKK α , IKK β)	conserved helix-loop-helix ubiquitous kinase	NM_001278	IKK α	S/T	IKK	Please inquire.		Please inquire.
CIT (CRIK)	citron rho-interacting serine/threonine kinase	NM_007174	CRIK	S/T	DMPK	CSKS-AQT0537B CSKS-AQT0537KR	1509.8	Carna (01-104)
CLK1	CDC like kinase 1	NM_004071	CLK1	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	SignalChem (C57-11G)
CLK2	CDC like kinase 2	NM_001291	CLK2	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	Carna (04-127)
CLK3	CDC like kinase 3	NM_001292	CLK3	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	Carna (04-128)
CLK4	CDC like kinase 4	NM_020666	CLK4	S/T	CLK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	Please inquire.
CSF1R (FMS)	colony stimulating factor 1 receptor	NM_005211	FMS	Y	PDGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-155)
CSK	C-terminal Src kinase	NM_004383	CSK	Y	Csk	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-111)
CSNK1A1 (CK1A1, CK1 α)	casein kinase 1 alpha 1	NM_001892	CK1 α	S/T	CK1	Please inquire.		Carna (03-101)
CSNK1A1L (CK1A1L, CK1 α 2)	casein kinase 1 alpha 1 like	NM_145203	CK1 α 2	S/T	CK1	Please inquire.		SignalChem (C75-10G)
CSNK1D (CK1D, CK1 δ)	casein kinase 1 delta	NM_001893	CK1 δ	S/T	CK1	Please inquire.		Carna (03-103)
CSNK1E (CK1E, CK1 ϵ)	casein kinase 1 epsilon	NM_001894	CK1 ϵ	S/T	CK1	Please inquire.		Carna (03-104)
CSNK1G1 (CK1G1, CK1 γ 1)	casein kinase 1 gamma 1	NM_022048	CK1 γ 1	S/T	CK1	Please inquire.		Carna (03-105)
CSNK1G2 (CK1G2, CK1 γ 2)	casein kinase 1 gamma 2	NM_001319	CK1 γ 2	S/T	CK1	Please inquire.		Carna (03-106)
CSNK1G3 (CK1G3, CK1 γ 3)	casein kinase 1 gamma 3	NM_004384	CK1 γ 3	S/T	CK1	Please inquire.		Carna (03-107)
CSNK2A1 (CK2A1, CK2 α 1)	casein kinase 2 alpha 1	NM_001895	CK2 α 1	S/T	CK2	Please inquire.		Thermo (PV3248)
CSNK2A2 (CK2A2, CK2 α 2)	casein kinase 2 alpha 2	NM_001896	CK2 α 2	S/T	CK2	Please inquire.		Thermo (PV3624)
DAPK1	death-associated protein kinase 1	NM_004938	DAPK1	S/T	DAPK	Please inquire.		SignalChem (D01-11G)
DAPK2 (DRP-1)	death-associated protein kinase 2	NM_014326	DAPK2	S/T	DAPK	Please inquire.		SignalChem (D02-10G)
DAPK3 (ZIPK)	death-associated protein kinase 3	NM_001348	DAPK3	S/T	DAPK	Please inquire.		Carna (02-136)
DCLK1 (DCAMKL1)	doublecortin like kinase 1	NM_004734	DCAMKL1	S/T	DCAMKL	Please inquire.		Carna (02-139)
DCLK2 (DCAMKL2)	doublecortin like kinase 2	NM_152619	DCAMKL2	S/T	DCAMKL	Please inquire.		Carna (02-140)
DDR1 (SRC treated)	discoidin domain receptor tyrosine kinase 1	NM_001954	DDR1	Y	DDR	CSKS-AQT0280B CSKS-AQT0280KR	1801.2	Carna (08-132)
DDR2	discoidin domain receptor tyrosine kinase 2	NM_006182	DDR2	Y	DDR	CSKS-AQT0235B CSKS-AQT0235KR	1830.2	Carna (08-114)
DMPK (DMPK1)	DM1 protein kinase	NM_006904	DMPK1	S/T	DMPK	Please inquire.		Please inquire.

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DSTYK (RIPK5, SGK496)	dual serine/threonine and tyrosine protein kinase	NM_015375	SGK496	S/T	Other-Unique	Please inquire.		Please inquire.
DYRK1A	dual specificity tyrosine phosphorylation regulated kinase 1A	NM_001396	DYRK1A	S/T	DYRK	Please inquire.		Carna (04-130)
DYRK1B	dual specificity tyrosine phosphorylation regulated kinase 1B	NM_004714	DYRK1B	S/T	DYRK	Please inquire.		Carna (04-131)
DYRK2	dual specificity tyrosine phosphorylation regulated kinase 2	NM_006482	DYRK2	S/T	DYRK	Please inquire.		Carna (04-132)
DYRK3	dual specificity tyrosine phosphorylation regulated kinase 3	NM_003582	DYRK3	S/T	DYRK	Please inquire.		Carna (04-133)
DYRK4	dual specificity tyrosine phosphorylation regulated kinase 4	NM_003845	DYRK4	S/T	DYRK	Please inquire.		Carna (04-434)
EEF2K (eEF2K)	eukaryotic elongation factor 2 kinase	NM_013302	eEF2K	S/T	Alpha	Please inquire.		Carna (10-113)
EGFR (D770_N771insNPG)	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		Carna (08-553)
EGFR (ERBB1)	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	BPS (40187)
EGFR [C797S/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663KR	1341.6	SignalChem (E10-122ZG)
EGFR [d746-750/C797S/T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663KR	1341.6	SignalChem (E10-122UG)
EGFR [d746-750/C797S]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		SignalChem (E10-122TG)
EGFR [d746-750/T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		SignalChem (E10-122KG)
EGFR [d746-750]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		Carna (08-527)
EGFR [L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		SignalChem (E10-122BG)
EGFR [L861Q]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		Carna (08-513)
EGFR [T790M/C797S/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		SignalChem (E10-122VG)
EGFR [T790M/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663KR	1341.6	Carna (08-510)
EGFR [T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	Please inquire.		Carna (08-194)
EIF2AK1 (HRI)	eukaryotic translation initiation factor 2 alpha kinase 1	NM_014413	HRI	S/T	PEK	CSKS-AQT0621B CSKS-AQT0621KR	3166.8	Carna (05-154)
EIF2AK2 (PKR)	eukaryotic translation initiation factor 2 alpha kinase 2	NM_002759	PKR	S/T	PEK	CSKS-AQT0355B CSKS-AQT0355KR	2705.0	Carna (05-156)
EIF2AK3 (PERK/PEK)	eukaryotic translation initiation factor 2 alpha kinase 3	NM_004836	PEK	S/T	PEK	Please inquire.		Carna (05-155)
EIF2AK4 (GCN2)	eukaryotic translation initiation factor 2 alpha kinase 4	NM_001013703	GCN2	S/T	PEK	CSKS-AQT0911B CSKS-AQT0911KR-2	2457.9	Carna (05-153)
EPHA1	EPH receptor A1	NM_005232	Epha1	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-119)
EPHA2	EPH receptor A2	NM_004431	Epha2	Y	Eph	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-121)
EPHA3	EPH receptor A3	NM_005233	Epha3	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-122)
EPHA4	EPH receptor A4	NM_004438	Epha4	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-123)
EPHA5	EPH receptor A5	NM_004439	Epha5	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-124)
EPHA6	EPH receptor A6	XM_114973	Epha6	Y	Eph	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-125)
EPHA7	EPH receptor A7	NM_004440	Epha7	Y	Eph	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-126)
EPHA8	EPH receptor A8	NM_020526	Epha8	Y	Eph	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-127)
EPHB1	EPH receptor B1	NM_004441	Ephb1	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-128)
EPHB2	EPH receptor B2	NM_004442	Ephb2	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-129)
EPHB3	EPH receptor B3	NM_004443	Ephb3	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-130)
EPHB4	EPH receptor B4	NM_004444	Ephb4	Y	Eph	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-131)
ERBB2 (HER2)	erb-b2 receptor tyrosine kinase 2	NM_004448	HER2/ErbB2	Y	EGFR	Please inquire.		BPS (40230)
ERBB2 (HER2) [A775/G776insYVMA]	erb-b2 receptor tyrosine kinase 2	NM_004448	HER2/ErbB2	Y	EGFR	Please inquire.		SignalChem (E27-13BG)
ERBB4 (HER4)	erb-b2 receptor tyrosine kinase 4	NM_005235	HER4/ErbB4	Y	EGFR	Please inquire.		Carna (08-118)
ERN1 (IRE1)	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715KR	2775.2	Thermo (A30971)
ERN1 [R727A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	Please inquire.		SignalChem(E31-12BG)
ERN1 [R728A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	Please inquire.		SignalChem(E31-12CG)
ERN1 [R727A/R728A]	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	Please inquire.		SignalChem(E31-12DG)
ERN2 (IRE2)	endoplasmic reticulum to nucleus signaling 2	NM_033266	IRE2	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715KR	2775.2	SignalChem (E32-11G)

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FAM20C	FAM20C golgi associated secretory pathway kinase	NM_020223				Please inquire.		SignalChem (F18-11G)
FER	FER tyrosine kinase	NM_005246	FER	Y	Fer	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-139)
FES	FES proto-oncogene, tyrosine kinase	NM_002005	FES	Y	Fer	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-140)
FGFR1	fibroblast growth factor receptor 1	NM_000604	FGFR1	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-133)
FGFR2	fibroblast growth factor receptor 2	NM_022970.3	FGFR2	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-134)
FGFR3	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-135)
FGFR3 [G697C]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	Please inquire.		Proqinase (1071-0000-1)
FGFR3 [K650E]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	Please inquire.		Carna (08-501)
FGFR3 [K650M]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	Please inquire.		Carna (08-199)
FGFR3 [V555L]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	Please inquire.		Carna (08-548)
FGFR3 [V555M]	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	Please inquire.		Carna (08-543)
FGFR4	fibroblast growth factor receptor 4	NM_002011	FGFR4	Y	FGFR	Please inquire.		Carna (08-136)
FGR	FGR proto-oncogene, Src family tyrosine kinase	NM_005248	FGR	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-166)
FLT1	fms related tyrosine kinase 1	NM_002019	FLT1	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-189)
FLT3	fms related tyrosine kinase 3	NM_004119	FLT3	Y	PDGFR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-154)
FLT4	fms related tyrosine kinase 4	NM_002020	FLT4	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-190)
FRK	fyn related Src family tyrosine kinase	NM_002031	FRK	Y	Src	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-167)
FYNa	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-168)
FYNb	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-531)
GAK	cyclin G associated kinase	NM_005255	GAK	S/T	NAK	Please inquire.		Please inquire.
GRK1 (RHOK)	G protein-coupled receptor kinase 1	NM_002929	RHOK	S/T	GRK	Please inquire.		SignalChem (R03-10G)
GRK2 (ADRBK1, BARK1)	G protein-coupled receptor kinase 2	NM_001619	BARK1	S/T	GRK	Please inquire.		Thermo (PV3361)
GRK3 (ADRBK2, BARK2)	G protein-coupled receptor kinase 3	NM_005160	BARK2	S/T	GRK	Please inquire.		Carna (01-112)
GRK4 (GPRK4)	G protein-coupled receptor kinase 4	NM_005307	GPRK4	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641KR	3339.6	Carna (01-313)
GRK5 (GPRK5)	G protein-coupled receptor kinase 5	NM_005308	GPRK5	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641KR	3339.6	INVT (PV3824)
GRK6 (GPRK6)	G protein-coupled receptor kinase 6	NM_002082	GPRK6	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641KR	3339.6	Please inquire.
GRK7 (GPRK7)	G protein-coupled receptor kinase 7	NM_139209	GPRK7	S/T	GRK	CSKS-AQT0641B CSKS-AQT0641KR	3339.6	Carna (01-316)
GSK3A (GSK3α)	glycogen synthase kinase 3 alpha	NM_019884	GSK3A	S/T	GSK	Please inquire.		Carna (04-140)
GSK3B (GSK3β)	glycogen synthase kinase 3 beta	NM_001146156	GSK3B	S/T	GSK	Please inquire.		Carna (04-141)
HASPIN	histone H3 associated protein kinase	NM_031965	Haspin	S/T	Haspin	CSKS-AQT0798B CSKS-AQT0798KR	1827.1	Carna (05-111)
HCK	HCK proto-oncogene, Src family tyrosine kinase	NM_002110	HCK	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-169)
HIPK1	homeodomain interacting protein kinase 1	NM_152696	HIPK1	S/T	DYRK	Please inquire.		Carna (04-135)
HIPK2	homeodomain interacting protein kinase 2	NM_022740	HIPK2	S/T	DYRK	Please inquire.		Carna (04-136)
HIPK3	homeodomain interacting protein kinase 3	NM_005734	HIPK3	S/T	DYRK	Please inquire.		Carna (04-137)
HIPK4	homeodomain interacting protein kinase 4	NM_144685	HIPK4	S/T	DYRK	Please inquire.		Carna (04-138)
HUNK	hormonally up-regulated Neu-associated kinase	NM_014586	HUNK	S/T	CAMKL	Please inquire.		Please inquire.
ICK	intestinal cell kinase	NM_014920	ICK	S/T	RCK	CSKS-AQT0257B CSKS-AQT0257KR	2011.4	Carna (04-156)
IGF1R	insulin-like growth factor 1 receptor	NM_000875	IGF1R	Y	InsR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-141)
IKKB (IKKβ)	inhibitor of nuclear factor kappa B kinase subunit beta	NM_001556	IKKb	S/T	IKK	Please inquire.		Carna (05-084)
IKKE (IKKε)	inhibitor of nuclear factor kappa B kinase subunit epsilon	NM_014002	IKKe	S/T	IKK	Please inquire.		Thermo (PV4875)
INSR (IR)	insulin receptor	NM_000208	INSR	Y	InsR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-142)
INSRR (IRR)	insulin receptor-related receptor	NM_014215	IRR	Y	InsR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-143)
IRAK1	interleukin 1 receptor associated kinase 1	NM_001569	IRAK1	S/T	IRAK	CSKS-AQT0326B CSKS-AQT0326KR	2079.5	Carna (09-101)

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IRAK4	interleukin 1 receptor associated kinase 4	NM_016123	IRAK4	S/T	IRAK	CSKS-AQT0326B CSKS-AQT0326KR	2079.5	Carna (09-145)
ITK	IL2-inducible T cell kinase	NM_005546	ITK	Y	Tec	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Thermo (PV3875)
JAK1 [JH1]	Janus kinase 1	NM_002227	JAK1	Y	Jak	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Thermo (PV4774)
JAK1 [JH1-JH2]	Janus kinase 1	NM_002227	JAK1	Y	Jak	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	SignalChem (J01-11G)
JAK2 [JH1]	Janus kinase 2	NM_004972	JAK2	Y	Jak	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-045)
JAK2 [JH1-JH2]	Janus kinase 2	NM_004972	JAK2	Y	Jak	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-514)
JAK3 [JH1]	Janus kinase 3	NM_000215	JAK3	Y	Jak	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-046)
KDR (VEGFR2)	kinase insert domain receptor	NM_002253	KDR	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-191)
KIT	KIT proto-oncogene receptor tyrosine kinase	NM_000222	KIT	Y	PDGFR	Please inquire.		Carna (08-156)
KSR1	kinase suppressor of ras 1	NM_014238	KSR1	S/T	RAF	Please inquire.		SignalChem (K07-11BG)
KSR2	kinase suppressor of ras 2	NM_173598	KSR2	S/T	RAF	Please inquire.		SignalChem (K01-11G)
LATS1	large tumor suppressor kinase 1	NM_004690	LATS1	S/T	NDR	Please inquire.		Carna (01-523)
LATS2	large tumor suppressor kinase 2	NM_014572	LATS2	S/T	NDR	CSKS-AQT0476B CSKS-AQT0476KR	2349.7	Carna (01-524)
LCK	LCK proto-oncogene, Src family tyrosine kinase	NM_005356	LCK	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-170)
LIMK1	LIM domain kinase 1	NM_002314	LIMK1	S/T	LISK	Please inquire.		Please inquire.
LIMK2	LIM domain kinase 2	CR456513	LIMK2	S/T	LISK	Please inquire.		Please inquire.
LRRK2	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	Please inquire.		Invitrogen (PV48783)
LRRK2 (R1441G)	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	Please inquire.		SignalChem (L10-12BG)
LRRK2 (R1441H)	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	Please inquire.		SignalChem (L10-12CG)
LRRK2 [G2019S]	leucine rich repeat kinase 2	NM_198578	LRRK2	S/T	LRRK	Please inquire.		SignalChem (L10-12GG)
LTK	leukocyte receptor tyrosine kinase	NM_002344	LTK	Y	ALK	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-106)
LYNa	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-171)
LYNb	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-172)
MAK	male germ cell associated kinase	NM_005906	MAK	S/T	RCK	CSKS-AQT0257B CSKS-AQT0257KR	2011.4	SignalChem (M01-10G)
MAP2K1 (MEK1)	mitogen-activated protein kinase kinase 1	NM_002755	MAP2K1	Dual Specificity	STE7	Please inquire.		Carna (07-141)
MAP2K2 (MEK2)	mitogen-activated protein kinase kinase 2	NM_030662	MAP2K2	Dual Specificity	STE7	Please inquire.		Carna (07-142)
MAP2K3 (MEK3)	mitogen-activated protein kinase kinase 3	NM_002756	MAP2K3	Dual Specificity	STE7	Please inquire.		Please inquire.
MAP2K4 (MEK4)	mitogen-activated protein kinase kinase 4	NM_003010	MAP2K4	Dual Specificity	STE7	Please inquire.		Please inquire.
MAP3K1 (MEK1)	mitogen-activated protein kinase kinase kinase 1	NM_005921	MAP3K1	S/T	STE11	Please inquire.		Carna (07-103)
MAP3K2 (MEK2)	mitogen-activated protein kinase kinase kinase 2	NM_006609	MAP3K2	S/T	STE11	Please inquire.		SignalChem (M10-10G)
MAP3K3 (MEK3)	mitogen-activated protein kinase kinase kinase 3	NM_002401	MAP3K3	S/T	STE11	Please inquire.		Carna (07-105)
MAP3K5 (ASK1)	mitogen-activated protein kinase kinase kinase 5	NM_005923	MAP3K5	S/T	STE11	CSKS-AQT0557B CSKS-AQT0557KR	2120.5	SignalChem (M13-10G)
MAP3K6 (ASK2)	mitogen-activated protein kinase kinase kinase 6	NM_004672	ASK2	S/T	STE11	Please inquire.		Please inquire.
MAP3K7 (TAK1)	mitogen-activated protein kinase kinase kinase 7	NM_145333; NM_003188	TAK1	S/T	MLK	CSKS-AQT0356B CSKS-AQT0356KR	3140.6	Please inquire.
MAP3K8 (Tjp2, COT)	mitogen-activated protein kinase kinase kinase 8	NM_005204	COT	S/T	STE-Unique	CSKS-AQT0716B CSKS-AQT0716KR	2697.1	Carna (07-301)
MAP3K9 (MLK1)	mitogen-activated protein kinase kinase kinase 9	NM_033141	MLK1	S/T	MLK	CSKS-AQT0645B CSKS-AQT0645KR	2778.3	Carna (09-115)
MAP3K10 (MLK2)	mitogen-activated protein kinase kinase kinase 10	NM_002446	MLK2	S/T	MLK	CSKS-AQT0646B CSKS-AQT0646KR	2769.3	Please inquire.
MAP3K11 (MLK3)	mitogen-activated protein kinase kinase kinase 11	NM_002419	MLK3	S/T	MLK	CSKS-AQT0646B CSKS-AQT0646KR	2769.3	Carna (09-017)
MAP3K12 (DLK)	mitogen-activated protein kinase kinase kinase 12	NM_006301	DLK	S/T	MLK	Please inquire.		Please inquire.
MAP3K13 (LZK)	mitogen-activated protein kinase kinase kinase 13	NM_004721	LZK	S/T	MLK	Please inquire.		Please inquire.
MAP3K14 (NIK)	mitogen-activated protein kinase kinase kinase 14	NM_003954	NIK	S/T	STE-Unique	CSKS-AQT0912B CSKS-AQT0912KR	2653.1	Please inquire.
MAP3K19 (YSK4)	mitogen-activated protein kinase kinase kinase 19	NM_025052	YSK4	S/T	STE11	CSKS-AQT0742B CSKS-AQT0742KR	2242.7	SignalChem (Y06-11G)
MAP3K20 (MLK7, ZAK)	mitogen-activated protein kinase kinase kinase 20	NM_016653	ZAK	S/T	MLK	CSKS-AQT0742B CSKS-AQT0742KR	2242.7	Carna (09-120)

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MAP3K21 (MLK4)	mitogen-activated protein kinase kinase kinase 21	NM_032435	MLK4	S/T	MLK	CSKS-AQT0918B CSKS-AQT0918KR	2554.0	Please inquire.
MAP4K1 (HPK1)	mitogen-activated protein kinase kinase kinase 1	NM_007181	HPK1	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Thermo (PV6355)
MAP4K2 (GCK)	mitogen-activated protein kinase kinase kinase 2	NM_004579	GCK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	SignalChem (M24-10G)
MAP4K3 (GLK, KHS2)	mitogen-activated protein kinase kinase kinase 3	NM_003618	KHS2	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	SignalChem (M25-11G)
MAP4K4 (HGK, ZC1)	mitogen-activated protein kinase kinase kinase 4	NM_004834	ZC1/HGK	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135KR	2563.9	Carna (07-137)
MAP4K5 (KHS1)	mitogen-activated protein kinase kinase kinase 5	NM_006575	KHS1	S/T	STE20	CSKS-AQT0178B CSKS-AQT0178KR	1434.7	SignalChem (M27-10G)
MAPK1 (ERK2)	mitogen-activated protein kinase 1	NM_002745	ERK2	S/T	MAPK	CSKS-AQT0651B CSKS-AQT0651KR	2206.6	Carna (04-143)
MAPK3 (ERK1)	mitogen-activated protein kinase 3	NM_002746	Erk1	S/T	MAPK	CSKS-AQT0650B CSKS-AQT0650KR	2270.7	Carna (04-142)
MAPK6 (ERK3)	mitogen-activated protein kinase 6	NM_002748	Erk3	S/T	MAPK	Please inquire.		Please inquire.
MAPK7 (ERK5)	mitogen-activated protein kinase 7	NM_002749	Erk5	S/T	MAPK	Please inquire.		Carna (04-146)
MAPK8 (JNK1)	mitogen-activated protein kinase 8	NM_002750	JNK1	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376KR	3114.8	Carna (04-163)
MAPK9 (JNK2)	mitogen-activated protein kinase 9	NM_002752	JNK2	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376KR	3114.8	Carna (04-164)
MAPK10 (JNK3)	mitogen-activated protein kinase 10	NM_002753	JNK3	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376KR	3114.8	Carna (04-150)
MAPK11 (p38β)	mitogen-activated protein kinase 11	NM_002751	p38b	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490KR	2089.4	Carna (04-153)
MAPK12 (p38γ)	mitogen-activated protein kinase 12	NM_002969	p38g	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649KR	2230.5	Carna (04-155)
MAPK13 (p38δ)	mitogen-activated protein kinase 13	NM_002754	p38d	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649KR	2230.5	Carna (04-154)
MAPK14 (p38α)	mitogen-activated protein kinase 14	NM_001315	p38a	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649KR	2230.5	Carna (04-152)
MAPK15 (ERK7)	mitogen-activated protein kinase 15	NM_139021	Erk7	S/T	MAPK	CSKS-AQT0374B CSKS-AQT0374KR	3570.3	Please inquire.
MAPKAPK2 (MK2)	MAPK activated protein kinase 2	NM_004759	MAPKAPK2	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701KR	1692.0	Carna (02-142)
MAPKAPK3 (MK3)	MAPK activated protein kinase 3	NM_004635	MAPKAPK3	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701KR	1692.0	Carna (02-143)
MAPKAPK5 (MK5)	MAPK activated protein kinase 5	NM_003668	MAPKAPK5	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701KR	1692.0	Carna (02-144)
MARK1	microtubule affinity regulating kinase 1	NM_018650	MARK1	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393KR	2582.0	Carna (02-120)
MARK2	microtubule affinity regulating kinase 2	NM_004954	MARK2	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393KR	2582.0	Carna (02-121)
MARK3	microtubule affinity regulating kinase 3	NM_002376	MARK3	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393KR	2582.0	Carna (02-122)
MARK4	microtubule affinity regulating kinase 4	NM_031417	MARK4	S/T	CAMKL	CSKS-AQT0393B CSKS-AQT0393KR	2582.0	Carna (02-123)
MAST3	microtubule associated serine/threonine kinase 3	NM_015016	MAST3	S/T	MAST	Please inquire.		Please inquire.
MASTL	microtubule associated serine/threonine kinase-like	NM_032844	MASTL	S/T	MAST	CSKS-AQT0703B CSKS-AQT0703KR	2752.2	SignalChem (M72-10G)
MATK (CTK)	megakaryocyte-associated tyrosine-protein kinase	NM_139355	MATK	Y	Csk	Please inquire.		Please inquire.
MELK	maternal embryonic leucine zipper kinase	NM_014791	MELK	S/T	CAMKL	Please inquire.		Carna (02-124)
MERTK (MER)	MER proto-oncogene, tyrosine kinase	NM_006343	MER	Y	Axl	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-108)
MET (c-MET, HGFR)	MET proto-oncogene, receptor tyrosine kinase	NM_000245	MET	Y	Met	CSKS-AQT0658B CSKS-AQT0658KR	1366.6	Carna (08-151)
MET (Y1230H)	MET proto-oncogene, receptor tyrosine kinase	NM_000245	MET	Y	Met	Please inquire.		Carna (08-178)
MINK1 (ZC3)	misshapen-like kinase 1	NM_015716	ZC3/MINK	S/T	STE20	CSKS-AQT0183B CSKS-AQT0183KR	1354.7	SignalChem (M53-11G)
MKNK1 (MNK1)	MAPK interacting serine/threonine kinase 1	NM_003684	MNK1	S/T	MAPKAPK	CSKS-AQT0414B CSKS-AQT0414KR	1398.7	Carna (02-145)
MKNK2 (MNK2)	MAPK interacting serine/threonine kinase 2	NM_017572	MNK2	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701KR	1692.0	Carna (02-146)
MST1R (RON)	macrophage stimulating 1 receptor	NM_016542	RON	Y	Met	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-152)
MTOR (FRAP)	mechanistic target of rapamycin kinase	NP_004949	FRAP	S/T	PIKK	Please inquire.		Please inquire.
MUSK	muscle associated receptor tyrosine kinase	NM_005592	MUSK	Y	Musk	CSKS-AQT0031B CSKS-AQT0031KR	1987.4	Carna (08-153)
MYLK (MLCK)	myosin light chain kinase	NM_053025	smMLCK	S/T	MLCK	CSKS-AQT0151B CSKS-AQT0151KR-1	2342.5	SignalChem (M62-11G)
MYLK2	myosin light chain kinase 2	NM_033118	skMLCK	S/T	MLCK	Please inquire.		SignalChem (M63-10H)
MYLK3 (caMLCK)	myosin light chain kinase 3	NM_182493	caMLCK	S/T	MLCK	Please inquire.		Please inquire.
MYLK4 (SgK085)	myosin light chain kinase family member 4	NM_001012418	SgK085	S/T	MLCK	CSKS-AQT0151B CSKS-AQT0151KR	2342.5	Please inquire.
MYO3A	myosin IIIA	NM_017433	MYO3A	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	SignalChem (M65-11G)

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
MYO3B	myosin IIB	NM_138995	MYO3B	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135KR	2563.9	SignalChem (M66-11G)
NEK1	NIMA related kinase 1	NM_012224	NEK1	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418KR	1450.8	Carna (05-123)
NEK2	NIMA related kinase 2	NM_002497	NEK2	S/T	NEK	Please inquire.		Carna (05-226)
NEK3	NIMA related kinase 3	NM_002498	NEK3	S/T	NEK	Please inquire.		Carna (05-127)
NEK4	NIMA related kinase 4	NM_003157	NEK4	S/T	NEK	Please inquire.		Carna (05-128)
NEK5	NIMA related kinase 5	XM_292160	NEK5	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418KR	1450.8	SignalChem (N07-11G)
NEK6	NIMA related kinase 6	NM_014397	NEK6	S/T	NEK	CSKS-AQT0418B CSKS-AQT0418KR	1450.8	Carna (05-130)
NEK7	NIMA related kinase 7	NM_133494	NEK7	S/T	NEK	Please inquire.		Carna (05-131)
NEK8	NIMA related kinase 8	NM_017810	NEK8	S/T	NEK	CSKS-AQT0349B CSKS-AQT0349KR	2673.15	Please inquire.
NEK9	NIMA related kinase 9	NM_033116	NEK9	S/T	NEK	Please inquire.		Carna (05-133)
NEK10	NIMA related kinase 10	NM_152534	NEK10	S/T	NEK	Please inquire.		SignalChem (N12-11G)
NEK11	NIMA related kinase 11	NM_002497	NEK11	S/T	NEK	Please inquire.		Please inquire.
NIM1 (NIM1K)	NIM1 serine/threonine protein kinase	NM_153361	NIM1	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694KR	1,466.78	SignalChem (N14-10G)
NLK (LAK1)	nemo like kinase	NM_016231	NLK	S/T	MAPK	CSKS-AQT0374B CSKS-AQT0374KR	3,570.28	Carna (04-151)
NTRK1 (TRKA)	neurotrophic receptor tyrosine kinase 1	NM_002529	TRKA	Y	Trk	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-186)
NTRK2 (TRKB)	neurotrophic receptor tyrosine kinase 2	NM_006180	TRKB	Y	Trk	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-187)
NTRK3 (TRKC)	neurotrophic receptor tyrosine kinase 3	NM_002530	TRKC	Y	Trk	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-197)
NUAK1 (ARK5)	NUAK family kinase 1	NM_014840	NuaK1	S/T	CAMKL	CSKS-AQT0395B CSKS-AQT0395KR	1743.0	Carna (02-126)
NUAK2 (SNARK)	NUAK family kinase 2	NM_030952	NuaK2	S/T	CAMKL	CSKS-AQT0395B CSKS-AQT0395KR	1743.0	Carna (02-127)
PAK1	p21 (RAC1) activated kinase 1	NM_002576	PAK1	S/T	STE20	CSKS-AQT0838B CSKS-AQT0838KR	1424.6	Carna (07-123)
PAK2	p21 (RAC1) activated kinase 2	NM_002577	PAK2	S/T	STE20	CSKS-AQT0839B CSKS-AQT0839KR	1521.7	Carna (07-124)
PAK3	p21 (RAC1) activated kinase 3	NM_002578	PAK3	S/T	STE20	CSKS-AQT0845B CSKS-AQT0845KR	1936.2	Carna (07-125)
PAK4	p21 (RAC1) activated kinase 4	NM_005884	PAK4	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840KR	1537.8	INVT (PV4212)
PAK5 (PAK7)	p21 (RAC1) activated kinase 5	NM_020341	PAK5	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840KR	1537.8	SignalChem (P07-10G)
PAK6	p21 (RAC1) activated kinase 6	NM_020168	PAK6	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840KR	1537.8	Carna (07-128)
PASK	PAS domain containing serine/threonine kinase	NM_015148	PASK	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694KR	1,466.78	Carna(02-128)
PBK (TOPK)	PDZ binding kinase	NM_018492	PBK	S/T	TOPK	CSKS-AQT0766B CSKS-AQT0766KR	2525.0	Invitrogen (PV4130)
PDGFRA (PDGFRα)	platelet derived growth factor receptor alpha	NM_006206	PDGFRa	Y	PDGFR	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-157)
PDGFRB (PDGFRβ)	platelet derived growth factor receptor beta	NM_002609	PDGFRb	Y	PDGFR	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-158)
PDK1 (PDHK1)	pyruvate dehydrogenase kinase 1	NM_002610; NM_002613	PDHK1	S/T	PDHK	Please inquire.		SignalChem (P57-10G)
PDK2 (PDHK2)	pyruvate dehydrogenase kinase 2	NM_002611	PDHK2	S/T	PDHK	Please inquire.		SignalChem (P58-10G)
PDK3 (PDHK3)	pyruvate dehydrogenase kinase 3	NM_005391	PDHK3	S/T	PDHK	Please inquire.		SignalChem (P59-10G)
PDK4 (PDHK4)	pyruvate dehydrogenase kinase 4	NM_002612	PDHK4	S/T	PDHK	Please inquire.		SignalChem (P60-10G)
PDPK1 (PDK1)	3-phosphoinositide dependent protein kinase 1	NM_002610; NM_002613	PDHK1	S/T	PDHK	CSKS-AQT0126B CSKS-AQT0126KR	1563.8	SignalChem (P14-10H)
PHKG1	phosphorylase kinase catalytic subunit gamma 1	NM_006213	PHKg1	S/T	PHK	Please inquire.		Carna (02-152)
PHKG2	phosphorylase kinase catalytic subunit gamma 2	NM_000294	PHKg2	S/T	PHK	Please inquire.		Carna (02-153)
PIM1	Pim-1 proto-oncogene, serine/threonine kinase	NM_002648	PIM1	S/T	PIM	CSKS-AQT0474B CSKS-AQT0474KR	1331.6	Carna (02-054)
PIM2	Pim-2 proto-oncogene, serine/threonine kinase	NM_006875	PIM2	S/T	PIM	CSKS-AQT0230B CSKS-AQT0230KR	1393.6	Carna (02-155)
PIM3	Pim-3 proto-oncogene, serine/threonine kinase	NM_001001852.2	PIM3	S/T	PIM	CSKS-AQT0474B CSKS-AQT0474KR	1331.6	Carna (02-156)
PINK1 (PINK)	PTEN induced kinase 1	NM_032409	PINK1	S/T	NKF2	Please inquire.		Boston Bio (AP-182)
PKMYT1 (MYT1)	Protein kinase, membrane associated tyrosine/threonine 1	NP_004194	MYT1	S/T	WEE	Please inquire.		Please inquire.
PKN1	protein kinase N1	NM_002741	PKN1	S/T	PKN	CSKS-AQT0509B CSKS-AQT0509KR	2067.4	Carna (01-144)
PKN2	protein kinase N2	NM_006256	PKN2	S/T	PKN	CSKS-AQT0462B CSKS-AQT0462KR	1648.0	Carna (01-145)

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
PKN3	protein kinase N3	NM_013355	PKN3	S/T	PKN	CSKS-AQT0509B CSKS-AQT0509KR	2067.4	Carna (01-146)
PLK1	polo like kinase 1	NM_005030	PLK1	S/T	PLK	Please inquire.		INVT (PV3501)
PLK2	polo like kinase 2	NM_006622	PLK2	S/T	PLK	Please inquire.		Please inquire.
PLK3	polo like kinase 3	NM_004073	PLK3	S/T	PLK	Please inquire.		INVT (PV3812)
PLK4	polo like kinase 4	NM_014264	PLK4	S/T	PLK	CSKS-AQT0898B CSKS-AQT0898KR	2565.0	INVT (PV6394)
PNCK (CAMK1 β)	pregnancy up-regulated nonubiquitous CaM kinase	NM_001039582	CaMK1b	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420KR-1	1821.2	Carna (02-105)
PRKAA1-B1-G1 (AMPK α 1 β 1Y1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	Carna (02-113)
PRKAA1-B1-G2 (AMPK α 1 β 1Y2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P55-10G)
PRKAA1-B1-G3 (AMPK α 1 β 1Y3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P56-10H)
PRKAA1-B2-G1 (AMPK α 1 β 2Y1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	Carna (02-147)
PRKAA1-B2-G2 (AMPK α 1 β 2Y2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P45-10G)
PRKAA1-B2-G3 (AMPK α 1 β 2Y3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPK α 1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P83-10G)
PRKAA2-B1-G1 (AMPK α 2 β 1Y1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	Carna (02-114)
PRKAA2-B1-G2 (AMPK α 2 β 1Y2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P84-10GH)
PRKAA2-B1-G3 (AMPK α 2 β 1Y3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P85-10GH)
PRKAA2-B2-G1 (AMPK α 2 β 2Y1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	Carna (02-148)
PRKAA2-B2-G2 (AMPK α 2 β 2Y2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P54-10H)
PRKAA2-B2-G3 (AMPK α 2 β 2Y3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPK α 2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420KR-4	1821.2	SignalChem (P46-10GH)
PRKACA (PKAC α)	protein kinase cAMP-activated catalytic subunit alpha	NM_002730	PKAC α	S/T	PKA	CSKS-AQT0458B CSKS-AQT0458KR	1123.4	Carna (01-127)
PRKACB (PKAC β)	protein kinase cAMP-activated catalytic subunit beta	NM_002731	PKAC β	S/T	PKA	CSKS-AQT0458B CSKS-AQT0458KR	1123.4	Carna (01-128)
PRKACG (PKAC γ , PKAC δ)	protein kinase cAMP-activated catalytic subunit gamma	NM_002732	PKAC γ	S/T	PKA	CSKS-AQT0231B CSKS-AQT0231KR	1370.6	SignalChem (P53-10G)
PRKCA (PKC α)	protein kinase C alpha	NM_002737	PKC α	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-133)
PRKCB1 (PKC β 1)	protein kinase C beta	NM_002738	PKC β	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-134)
PRKCB2 (PKC β 2)	protein kinase C beta	X07109	PKC β	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-165)
PRKCD (PKC δ)	protein kinase C delta	NM_006254	PKC δ	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-135)
PRKCE (PKC ϵ)	protein kinase C epsilon	NM_005400	PKC ϵ	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-136)
PRKCG (PKC γ)	protein kinase C gamma	NM_002739	PKC γ	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-137)
PRKCH (PKC η)	protein kinase C eta	NM_006255	PKC η	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-138)
PRKCI (PKC ι)	protein kinase C iota	NM_002740	PKC ι	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-139)
PRKCQ (PKC θ)	protein kinase C theta	NM_006257	PKC θ	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-140)
PRKCZ (PKC ζ)	protein kinase C zeta	NM_002744	PKC ζ	S/T	PKC	CSKS-AQT0462B CSKS-AQT0462KR-5	1648.0	Carna (01-141)
PRKD1 (PKD1)	protein kinase D1	NM_002742	PKD1	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694KR	1466.8	Carna (02-157)
PRKD2 (PKD2)	protein kinase D2	NM_016457	PKD2	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694KR	1466.8	Carna (02-158)
PRKD3 (PKD3)	protein kinase D3	NM_005813	PKD3	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694KR	1466.8	Carna (02-159)
PRKDC (DNA-PK)	protein kinase, DNA-activated, catalytic subunit	NM_006904	DNAPK	S/T	PIKK	Please inquire.		Thermo (PV5866)
PRKG1 (PKG1, PGK)	protein kinase cGMP-dependent I	NM_006258	DNAPK	S/T	PIKK	CSKS-AQT0324B CSKS-AQT0324KR-7	1863.3	Carna (01-142)
PRKG2 (PKG2, PGK2, CGK2)	protein kinase cGMP-dependent II	NM_006259	PKG2	S/T	PKG	Please inquire.		Carna (01-143)
PRKX	protein kinase cAMP-dependent X-linked catalytic subunit	NM_005044	PRKX	S/T	PKA	CSKS-AQT0186B CSKS-AQT0186KR	1398.7	Carna (01-130)
PTK2 (FAK)	protein tyrosine kinase 2	NM_153831	FAK	Y	FAK	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-137)
PTK2B (PYK2)	protein tyrosine kinase 2 beta	NM_004103	PYK2	Y	FAK	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-138)
PTK6 (BRK)	protein tyrosine kinase 6	NM_005975	BRK	Y	Src	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-165)
RAF1 (Y340E/Y341E)	Raf-1 proto-oncogene, serine/threonine kinase	NM_002880	RAF1	S/T	RAF	CSKS-AQT0688B CSKS-AQT0688KR	2688.0	SignalChem (R01-13G-10)
BCR RET (fusion)						Please inquire.		SignalChem (R02-19EG)

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
RET	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-159)
RET [G691S]	ret proto-oncogene	NM_020975	RET	Y	Ret	Please inquire.		Carna (08-522)
RET [M918T]	ret proto-oncogene	NM_020975	RET	Y	Ret	Please inquire.		Carna (08-508)
RET [S891A]	ret proto-oncogene	NM_020975	RET	Y	Ret	Please inquire.		Carna (08-523)
RET [Y791F]	ret proto-oncogene	NM_020975	RET	Y	Ret	Please inquire.		Carna (08-521)
RET:CCDC6 (CCDC6-RET)	ret proto-oncogene	NM_020975	RET	Y	Ret	Please inquire.		SignalChem (R02-19BG)
RIPK1	receptor interacting serine/threonine kinase 1	NM_003840	RIPK1	S/T	RIPK	Please inquire.		Please inquire.
RIPK2	receptor interacting serine/threonine kinase 2	NM_003821	RIPK2	S/T	RIPK	CSKS-AQT0205B CSKS-AQT0205KR-8	3110.6	SignalChem (R08-11G)
RIPK3	receptor interacting serine/threonine kinase 3	NM_006871	RIPK3	S/T	RIPK	Please inquire.		Please inquire.
ROCK1	Rho associated coiled-coil containing protein kinase 1	NM_005406	ROCK1	S/T	DMPK	CSKS-AQT0537B CSKS-AQT0537KR	1509.8	Carna (01-109)
ROCK2	Rho associated coiled-coil containing protein kinase 2	NM_004850	ROCK2	S/T	DMPK	CSKS-AQT0421B CSKS-AQT0421KR	1464.8	Carna (01-110)
ROS1 (ROS)	ROS proto-oncogene 1, receptor tyrosine kinase	NM_002944	ROS	Y	Sev	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-163)
ROS1 [G2032R]	ROS proto-oncogene 1, receptor tyrosine kinase	NM_002944	ROS	Y	Sev	Please inquire.		SignalChem (R14-12BG)
RPS6KA1 (RSK1)	ribosomal protein S6 kinase A1	NM_002953	RSK3	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535KR	1945.2	Carna (01-149)
RPS6KA2 (RSK3)	ribosomal protein S6 kinase A2	NM_021135	RSK1	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535KR	1945.2	Carna (01-151)
RPS6KA3 (RSK2)	ribosomal protein S6 kinase A3	NM_004586	RSK2	S/T	RSK	CSKS-AQT0233B CSKS-AQT0233KR	1488.7	Carna (01-150)
RPS6KA4 (MSK2)	ribosomal protein S6 kinase A4	NM_003942	MSK2	S/T	RSK	Please inquire.		Carna (01-148)
RPS6KA5 (MSK1)	ribosomal protein S6 kinase A5	NM_004755	MSK1	S/T	RSK	Please inquire.		Carna (01-147)
RPS6KA6 (RSK4)	ribosomal protein S6 kinase A6	NM_014496	RSK4	S/T	RSK	CSKS-AQT0232B CSKS-AQT0232KR	1666.0	Carna (01-152)
RPS6KB1 (p70S6K)	ribosomal protein S6 kinase B1	NM_003161	p70S6K	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535KR	1945.2	Carna (01-158)
RPS6KB2 (p70S6KB)	ribosomal protein S6 kinase B2	NM_003952	p70S6Kb	S/T	RSK	CSKS-AQT0231B CSKS-AQT0231KR	1370.6	SignalChem (R22-10G)
SBK1 (SBK)	SH3 domain binding kinase 1	NM_001024401	SBK	S/T	NKF1	Please inquire.		SignalChem (S56-10G)
SGK1 (SGK)	serum/glucocorticoid regulated kinase 1	NM_005627	SGK	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566KR	1295.4	Carna (01-158)
SGK2	serum/glucocorticoid regulated kinase 2	NM_016276	SGK2	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566KR	1295.4	Carna (01-159)
SGK3	serum/glucocorticoid regulated kinase family member 3	NM_013257	SGK3	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566KR	1295.4	Carna (01-160)
SIK1 (SIK)	salt inducible kinase 1	NM_173354	SIK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508KR	2040.4	Carna (02-131)
SIK2 (QIK)	salt inducible kinase 2	NM_015191	QIK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508KR	2040.4	Carna (02-129)
SIK3 (QSK)	salt inducible kinase 3	BC128510.1	QSK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508KR	2040.4	INVT (PV6403)
SLK	STE20 like kinase	NM_014720	SLK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Carna (07-129)
SNRK	SNF related kinase	NM_017719	SNRK	S/T	CAMKL	Please inquire.		SignalChem (S16-10G)
SRC	SRC proto-oncogene, non-receptor tyrosine kinase	NM_005417	SRC	Y	Src	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-173)
SRC N1	SRC proto-oncogene, non-receptor tyrosine kinase	NP_005408	SRC	Y	Src	Please inquire.		INVT (P2904)
SRMS (SRM)	SRC related kinase lacking C-terminal regulatory tyrosine and N-terminal mutation sites	NM_080823	SRM	Y	Src	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-174)
SRPK1	SRSF protein kinase 1	NM_003137	SRPK1	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	SignalChem (S21-10G)
SRPK2	SRSF protein kinase 2	NM_182692	SRPK2	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	Carna (04-161)
SRPK3 (MSSK1)	SRSF protein kinase 3	NM_014370	MSSK1	S/T	SRPK	CSKS-AQT0360B CSKS-AQT0360KR	2741.0	SignalChem (S41-10G)
STK3 (MST2)	serine/threonine kinase 3	NM_006281	MST2	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Carna (07-117)
STK4 (MST1)	serine/threonine kinase 4	NM_006282	MST1	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135KR	2563.9	SignalChem (S25-10G)
STK10 (LOK)	serine/threonine kinase 10	NM_005990	LOK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Carna (07-315)
STK11 (LKB1, AMPKK)	serine/threonine kinase 11	NM_000455	LKB1	S/T	CAMKL	CSKS-AQT0728B CSKS-AQT0728KR	2563.0	Carna (02-119)
STK16 (MPSK1, PKL12, TSF1)	serine/threonine kinase 16	NM_001008910	MPSK1	S/T	NAK	Please inquire.		Please inquire.
STK17A (DRAK1)	serine/threonine kinase 17a	NM_004760	DRAK1	S/T	DAPK	Please inquire.		Carna (02-137)
STK17B (DRAK2)	serine/threonine kinase 17b	NM_004226	DRAK2	S/T	DAPK	Please inquire.		SignalChem (S34-10G)

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
STK24 (MST3)	serine/threonine kinase 24	NM_003576	MST3	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Carna (07-118)
STK25 (YSK1)	serine/threonine kinase 25	NM_006374	YSK1	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505KR	2183.6	Carna(07-136)
STK26 (MST4)	serine/threonine kinase 26	NM_016542	MST4	S/T	STE20	Please inquire.		Carna (07-119)
STK33	serine/threonine kinase 33	NM_030906	STK33	S/T	CAMK-Unique	CSKS-AQT0355B CSKS-AQT0355KR	2705.0	Please inquire.
STK38 (NDR1)	serine/threonine kinase 38	NM_007271	NDR1	S/T	NDR	CSKS-AQT0232B CSKS-AQT0232KR	1666.0	Carna (01-125)
STK38L (NDR2)	serine/threonine kinase 38 like	NM_015000	NDR2	S/T	NDR	CSKS-AQT0232B CSKS-AQT0232KR	1666.0	Carna (01-126)
SYK	spleen associated tyrosine kinase	NM_003177	SYK	Y	Syk	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-176)
TAOK1 (TAO1)	TAO kinase 1	NM_020791	TAO1	S/T	STE20	CSKS-AQT0253B CSKS-AQT0253KR	1443.8	SignalChem (T24-11G)
TAOK2 (TAO2)	TAO kinase 2	NM_016151	TAO2	S/T	STE20	CSKS-AQT0253B CSKS-AQT0253KR	1443.8	Carna (07-133)
TAOK3 (TAO3)	TAO kinase 3	NM_016281	TAO3	S/T	STE20	Please inquire.		SignalChem (T26-11G)
TBK1	TANK binding kinase 1	NM_013254	TBK1	S/T	IKK	CSKS-AQT0897B CSKS-AQT0897KR	2573.9	Carna (05-115)
TEC	tec protein tyrosine kinase	NM_003215	TEC	Y	Tec	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-182)
TEK (TIE2)	TEK receptor tyrosine kinase	NM_000459	TIE2	Y	Tie	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-185)
TESK2	testis associated actin remodelling kinase 2	NM_007170	TESK2	S/T	LISK	Please inquire.		Please inquire.
TLK1	tousled like kinase 1	NM_012290	TLK1	S/T	TLK	CSKS-AQT0683B CSKS-AQT0683KR	2616.9	Carna (05-166)
TLK2	tousled like kinase 2	NM_006852	TLK2	S/T	TLK	CSKS-AQT0683B CSKS-AQT0683KR	2616.9	Please inquire.
TNIK (ZC2)	TRAF2 and NCK interacting kinase	NM_015028	ZC2/TNIK	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135KR	2563.9	Carna (07-138)
TNK1	tyrosine kinase non receptor 1	NM_003985.4	TNK1	Y	Ack	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	SignalChem (T12-11G)
TNK2 (ACK)	tyrosine kinase non receptor 2	NM_005781	ACK	Y	Ack	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Invitrogen(PV4807)
TRPM7 (CHAK1)	transient receptor potential cation channel subfamily M member 7	NM_017672	ChaK1	S/T	Alpha	CSKS-AQT0349B CSKS-AQT0349KR	2673.2	Carna (10-111)
TSSK1B (TSSK1)	testis specific serine kinase 1B	NM_032028	TSSK1	S/T	TSSK	CSKS-AQT0394B CSKS-AQT0394KR	2600.0	Carna (02-364)
TSSK2	testis specific serine kinase 2	NM_053006	TSSK2	S/T	TSSK	Please inquire.		SignalChem (S38-10G)
TSSK3	testis specific serine kinase 3	NM_052841	TSSK3	S/T	TSSK	Please inquire.		Carna (02-166)
TSSK6 (SSTK)	testis specific serine kinase 6	NM_032037	SSTK	S/T	TSSK	CSKS-AQT0252B CSKS-AQT0252KR	1714.0	Please inquire.
TTBK1	tau tubulin kinase 1	NM_032538	TTBK1	S/T	TTBK	Please inquire.		SignalChem (T17-11G)
TTBK2	tau tubulin kinase 2	NM_173500	TTBK2	S/T	TTBK	Please inquire.		Carna (03-109)
TTK	TTK protein kinase	NM_003318	TTK	S/T	TTK	Please inquire.		Carna (05-169)
TXK	TXK tyrosine kinase	NM_003328	TXK	Y	Tec	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-183)
TYK2 [JH1]	tyrosine kinase 2	NM_003331	TYK2	Y	Jak	CSKS-AQT0663B CSKS-AQT0663KR	1341.6	Carna (08-147)
TYK2 [JH1-JH2]	tyrosine kinase 2	NM_003331	TYK2	Y	Jak	Please inquire.		Please inquire.
TYRO3	TYRO3 protein tyrosine kinase	NM_006293	TYRO3	Y	Axl	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-109)
ULK1	unc-51 like autophagy activating kinase 1	NM_003565	ULK1	S/T	ULK	Please inquire.		SignalChem (U01-11G)
ULK2	unc-51 like autophagy activating kinase 2	NM_014683	ULK2	S/T	ULK	Please inquire.		SignalChem (U02-11G)
ULK3	unc-51 like autophagy activating kinase 3	NM_015518	ULK3	S/T	ULK	CSKS-AQT0683B CSKS-AQT0683KR	2616.9	Carna (05-173)
VRK1	VRK serine/threonine kinase 1	NM_003384	VRK1	S/T	VRK	Please inquire.		Please inquire.
VRK2	VRK serine/threonine kinase 2	NM_006296	VRK2	S/T	VRK	Please inquire.		Please inquire.
WEE1	WEE1 G2 checkpoint kinase	NM_003390	WEE1	Dual Specificity	WEE	CSKS-AQT0728B CSKS-AQT0728KR	2563.0	Please inquire.
YES1 (YES)	YES proto-oncogene 1, Src family tyrosine kinase	NM_005433	YES	Y	Src	CSKS-AQT0515B CSKS-AQT0515KR	1585.9	Carna (08-175)
ZAP70	zeta chain of T cell receptor associated protein kinase 70	NM_001079	ZAP70	Y	Syk	CSKS-AQT0653B CSKS-AQT0653KR	2022.4	Carna (08-177)

Note: Substrate concentrations range from 10-15µM

Table 1.

Total Number of PhosphoSens Red-Shift TRF Kinase Assays

Total Number of Assays: 270*

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

Table 2.

General Kinase Assay Reaction Conditions*
10-15 μ 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 ₂
<i>Any additional co-factors or additives (as indicated in Table 4.)</i>

*Does not account for Enzyme Storage Buffer contributions

Table 3.

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

*The number designations after the Sensor Peptides Product Numbers denote the co-factors or additives captured above.

Table 4.

General Kinase Assay Reaction Set-Up
<i>using a 384-well plate with 25 μL total volume in one well at 10 μM Sensor Peptide</i>
Add 2 μ L 100 μ M Sensor Peptide (CSKS-AQTxxxx)
Add 14 μ L Master Mix (with Enzyme Reaction Buffer, ATP, DTT, and EGTA)
Incubate Reaction Mix (as prepared above) for 5 minutes @ 30°C
Add 4 μ 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 (iExMax 360nm/iEmMax ~492 nm [485-498 nm]) until reaction is no longer linear.
Remove plate from reader
Add 4 μ L 30 mM Europium (III) (AQT6XEUR) to each well
Incubate for 5 minutes @ Room Temperature
Return the plate to the reader and take an endpoint time-resolved fluorescence (RFU) reading (iExMax 360 nm/iEmMax ~620 nm).

Table 5.

PhosphoSens-Red Kinase Kit Components				
Product Number	Component	Description	Volume	Storage
CSKS-AQTxxxxKR*	PhosphoSens Substrate, 1 mM	PhosphoSens Sensor Peptide Substrate, 1 mM	35 μ L	-20°C or below
	ATP Solution, 100 mM	100 mM ATP in nuclease-free water	150 μ L	-20°C or below. Minimize repeated freeze/thaw cycles
	DTT Solution, 1 000 mM	1 000 mM DTT in nuclease-free water	150 μ 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 ₂	1,650 μ L	-20°C or below
	Enzyme Dilution Buffer, 5X	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL BSA	1,650 μ L	-20°C or below. Minimize repeated freeze/thaw cycles
	EGTA Solution, 550 mM	550 mM EGTA in 2000 mM NaOH	150 μ L	-20°C or below
	Europium (III), 30 mM	30mM Europium (III) in 0.6 mM HCl	1,200 μ L	Room temperature or below

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

Table 6.

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 ₂	15mL	-20°C or below
AQT5XEDB	Enzyme Dilution Buffer, 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
AQT6XEUR	Europium (III), 30 mM	30mM Europium (III) in 0.6 mM HCl	35mL	Room temperature or below