

## PhosphoSens Sensor Peptides for Red-Shift Time-Resolved Fluorescence Kinase Assays

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

Convert the PhosphoSens Continuous (FI, fluorescence intensity) format to a Red-Shift (TRF, time-resolved fluorescence) format by simply adding Europium at any desired time point. Thus, yielding an end-point assay that corrects for compound auto-fluorescence and enables batch mode processing for HTS.

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

**Bulk Sensor Peptide:** Designed for higher throughput applications. 1mg is sufficient for ~1,200 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 2 below).

**Evaluation Kits:** 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).

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
ABL1	ABL proto-oncogene 1, non-receptor tyrosine kinase	NM_005157	ABL1	Y	Abl	CSKS-AQT0030B CSKS-AQT0030K	1987.4	Carna (08-101)
ABL2 (ARG)	ABL proto-oncogene 2, non-receptor tyrosine kinase	NM_005157	ARG	Y	Abl	CSKS-AQT0030B CSKS-AQT0030K	1987.4	Carna (08-102)
AKT1 (PKB)	AKT Serine/Threonine Kinase 1	NM_005163	AKT1	S/T	Akt	CSKS-AQT0569B CSKS-AQT0569K	1365.6	Carna (01-101)
AKT2 (PKBb)	AKT Serine/Threonine Kinase 2	NM_001626	AKT2	S/T	Akt	CSKS-AQT0232B CSKS-AQT0232K	1666.0	Carna (01-102)
AKT3 (PKBg)	AKT Serine/Threonine Kinase 3	NM_005465	AKT3	S/T	Akt	CSKS-AQT0569B CSKS-AQT0569K	1365.6	Carna (01-103)
ALK	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-518)
ALK [L1196M/G1202R]	ALK receptor tyrosine kinase	NM_004304	ALK	Y	ALK	CSKS-AQT0515B CSKS-AQT0515K	1585.9	SignalChem (A19-12NG)
AURKA (AURA)	aurora kinase A	NM_003600	AurA	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-101)
AURKB (AURB)	aurora kinase B	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-102)
AURKC (AURC)	aurora kinase C	NM_004217	AurB	S/T	Aur	CSKS-AQT0186B CSKS-AQT0186K	1398.7	Carna (05-103)
AXL	AXL receptor tyrosine kinase	NM_001699	AXL	Y	Axl	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-107)
BLK	BLK proto-oncogene, Src family tyrosine kinase	NM_001715	BLK	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-164)
BMX	BMX non-receptor tyrosine kinase	NM_001721	BMX	Y	Tec	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-179)
BTK	Bruton tyrosine kinase	NM_000061	BTK	Y	Tec	CSKS-AQT0663B CSKS-AQT0663K	1341.6	Carna (08-180)
BUB1	BUB1 mitotic checkpoint serine/threonine kinase	NM_004336	BUB1	S/T	BUB	CSKS-AQT0349B CSKS-AQT0349K	2673.2	Carna (05-187)
CAMK4	calcium/calmodulin dependent protein kinase IV	NM_001744	CaMK4	S/T	CAMK1	CSKS-AQT0420B CSKS-AQT0420K	1821.2	Carna (02-108)
CDC42BPG (DMPK2)	CDC42 binding protein kinase gamma	NM_017525	DMPK2	S/T	DMPK	CSKS-AQT0837B CSKS-AQT0837K	1956.2	SignalChem (D17-11G)
CDK1/CycE1	cyclin dependent kinase 1	NM_001786	CDC2	S/T	CDK	CSKS-AQT0296B CSKS-AQT0296K	1052.2	Proqinase (0134-0055-1)
CDK2/CycE1	cyclin dependent kinase 2	NM_001798	CDK2	S/T	CDK	CSKS-AQT0255B CSKS-AQT0255K	1449.8	Carna (04-165)
CDK4 /CycD3	cyclin dependent kinase 4	NM_000075	CDK4	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	Carna (04-105)
CDK5/p25	cyclin dependent kinase 5	NM_004935	CDK5	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	Carna (04-106)
CDK6/CycD3	cyclin dependent kinase 6	NM_001259	CDK6	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	Carna (04-107)
CDK7/CycH/MAT1	cyclin dependent kinase 7	NM_001799	CDK7	S/T	CDK	CSKS-AQT0733B CSKS-AQT0733K	3243.6	Carna (04-108)
CDK9 (TAK) w/CycT1	cyclin dependent kinase 9	NM_001261.2	CDK9	S/T	CDK	CSKS-AQT0449B CSKS-AQT0449K	2581.0	Carna (04-110)
CDK16/CycY	cyclin dependent kinase 16	NM_006201	PCTAIRE1	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	Carna (04-116)
CDK17 (PCTAIRE2)/CycY	cyclin dependent kinase 17	NM_002595	PCTAIRE2	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	SignalChem (P10-10G)
CDK18/CycY (PCTAIRE3)	cyclin dependent kinase 18	NM_002596	PCTAIRE3	S/T	CDK	CSKS-AQT0730B CSKS-AQT0730K	2578.0	Thermo (A30492)

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
CHEK1 (CHK1)	checkpoint kinase 1	NM_001274	CHK1	S/T	CAMKL	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-117)
CHEK2 (CHK2)	checkpoint kinase 2	NM_007194	CHK2	S/T	RAD53	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-162)
CIT (CRIK)	citron rho-interacting serine/threonine kinase	NM_007174	CRIK	S/T	DMPK	CSKS-AQT0537B CSKS-AQT0537K	1509.8	Carna (01-104)
CSF1R (FMS)	colony stimulating factor 1 receptor	NM_005211	FMS	Y	PDGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-155)
CSK	C-terminal Src kinase	NM_004383	CSK	Y	Csk	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-111)
DDR1 (SRC treated)	discoidin domain receptor tyrosine kinase 1	NM_001954	DDR1	Y	DDR	CSKS-AQT0280B CSKS-AQT0280K	1801.2	Carna (08-132)
DDR2	discoidin domain receptor tyrosine kinase 2	NM_006182	DDR2	Y	DDR	CSKS-AQT0235B CSKS-AQT0235K	1830.2	Carna (08-114)
EGFR (ERBB1)	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	BPS (40187)
EGFR [C797S/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663K	1341.6	SignalChem (E10-122ZG)
EGFR [d746-750/C797S/T790M]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663K	1341.6	SignalChem (E10-122UG)
EGFR [T790M/L858R]	epidermal growth factor receptor	NM_005228	EGFR	Y	EGFR	CSKS-AQT0663B CSKS-AQT0663K	1341.6	Carna (08-510)
EIF2AK1 (HRI)	eukaryotic translation initiation factor 2 alpha kinase 1	NM_014413	HRI	S/T	PEK	CSKS-AQT0621B CSKS-AQT0621K	3166.8	Carna (05-154)
EIF2AK4 (GCN2)	eukaryotic translation initiation factor 2 alpha kinase 4	NM_001013703	GCN2	S/T	PEK	CSKS-AQT0911B CSKS-AQT0911K	2457.9	Carna (05-153)
EPHA1	EPH receptor A1	NM_005232	Epha1	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-119)
EPHA2	EPH receptor A2	NM_004431	Epha2	Y	Eph	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-121)
EPHA3	EPH receptor A3	NM_005233	Epha3	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-122)
EPHA4	EPH receptor A4	NM_004438	Epha4	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-123)
EPHA5	EPH receptor A5	NM_004439	Epha5	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-124)
EPHA6	EPH receptor A6	XM_114973	Epha6	Y	Eph	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-125)
EPHA7	EPH receptor A7	NM_004440	Epha7	Y	Eph	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-126)
EPHA8	EPH receptor A8	NM_020526	Epha8	Y	Eph	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-127)
EPHB1	EPH receptor B1	NM_004441	Ephb1	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-128)
EPHB2	EPH receptor B2	NM_004442	Ephb2	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-129)
EPHB3	EPH receptor B3	NM_004443	Ephb3	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-130)
EPHB4	EPH receptor B4	NM_004444	Ephb4	Y	Eph	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-131)
ERN1 (IRE1)	endoplasmic reticulum to nucleus signaling 1	NM_001433	IRE1	S/T	IRE	CSKS-AQT0715B CSKS-AQT0715K	2775.2	Thermo (A30971)
FER	FER tyrosine kinase	NM_005246	FER	Y	Fer	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-139)
FES	FES proto-oncogene, tyrosine kinase	NM_002005	FES	Y	Fer	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-140)
FGFR1	fibroblast growth factor receptor 1	NM_000604	FGFR1	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-133)
FGFR2	fibroblast growth factor receptor 2	NM_022970.3	FGFR2	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-134)
FGFR3	fibroblast growth factor receptor 3	NM_000142	FGFR3	Y	FGFR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-135)
FGR	FGR proto-oncogene, Src family tyrosine kinase	NM_005248	FGR	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-166)
FLT1	fms related tyrosine kinase 1	NM_002019	FLT1	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-189)
FLT3	fms related tyrosine kinase 3	NM_004119	FLT3	Y	PDGFR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-154)
FLT4	fms related tyrosine kinase 4	NM_002020	FLT4	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-190)
FRK	fyn related Src family tyrosine kinase	NM_002031	FRK	Y	Src	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-167)

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FYNa	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-168)
FYNb	FYN proto-oncogene, Src family tyrosine kinase	NM_002037	FYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-531)
HCK	HCK proto-oncogene, Src family tyrosine kinase	NM_002110	HCK	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-169)
IGF1R	insulin-like growth factor 1 receptor	NM_000875	IGF1R	Y	InsR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-141)
INSR (IR)	insulin receptor	NM_000208	INSR	Y	InsR	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-142)
INSRR (IRR)	insulin receptor-related receptor	NM_014215	IRR	Y	InsR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-143)
ITK	IL2-inducible T cell kinase	NM_005546	ITK	Y	Tec	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Thermo (PV3875)
JAK2 [JH1]	Janus kinase 2	NM_004972	JAK2	Y	Jak	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-045)
JAK3 [JH1]	Janus kinase 3	NM_000215	JAK3	Y	Jak	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-046)
KDR (VEGFR2)	kinase insert domain receptor	NM_002253	KDR	Y	VEGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-191)
LCK	LCK proto-oncogene, Src family tyrosine kinase	NM_005356	LCK	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-170)
LTK	leukocyte receptor tyrosine kinase	NM_002344	LTK	Y	ALK	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-106)
LYNa	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-171)
LYNb	LYN proto-oncogene, Src family tyrosine kinase	NM_002350	LYN	Y	Src	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-172)
MAP3K5 (ASK1)	mitogen-activated protein kinase kinase kinase 5	NM_005923	MAP3K5	S/T	STE11	CSKS-AQT0557B CSKS-AQT0557K	2120.5	SignalChem (M13-10G)
MAP3K8 (Tpl2, COT)	mitogen-activated protein kinase kinase kinase 8	NM_005204	COT	S/T	STE-Unique	CSKS-AQT0716B CSKS-AQT0716K	2697.1	Carna (07-301)
MAP4K1 (HPK1)	mitogen-activated protein kinase kinase kinase 1	NM_007181	HPK1	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	Thermo (PV6355)
MAP4K2 (GCK)	mitogen-activated protein kinase kinase kinase 2	NM_004579	GCK	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	2183.6	SignalChem (M24-10G)
MAP4K3 (GLK, KHS2)	mitogen-activated protein kinase kinase kinase 3	NM_003618	KHS2	S/T	STE20	CSKS-AQT0505B CSKS-AQT0505K	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-AQT0135K	2563.9	Carna (07-137)
MAPK1 (ERK2)	mitogen-activated protein kinase 1	NM_002745	ERK2	S/T	MAPK	CSKS-AQT0651B CSKS-AQT0651K	2206.6	Carna (04-143)
MAPK3 (ERK1)	mitogen-activated protein kinase 3	NM_002746	Erk1	S/T	MAPK	CSKS-AQT0650B CSKS-AQT0650K	2270.7	Carna (04-142)
MAPK8 (JNK1)	mitogen-activated protein kinase 8	NM_002750	JNK1	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-163)
MAPK9 (JNK2)	mitogen-activated protein kinase 9	NM_002752	JNK2	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-164)
MAPK10 (JNK3)	mitogen-activated protein kinase 10	NM_002753	JNK3	S/T	MAPK	CSKS-AQT0376B CSKS-AQT0376K	3114.8	Carna (04-150)
MAPK11 (p38β)	mitogen-activated protein kinase 11	NM_002751	p38b	S/T	MAPK	CSKS-AQT0490B CSKS-AQT0490K	2089.4	Carna (04-153)
MAPK12 (p38γ)	mitogen-activated protein kinase 12	NM_002969	p38g	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649K	2230.5	Carna (04-155)
MAPK13 (p38δ)	mitogen-activated protein kinase 13	NM_002754	p38d	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649K	2230.5	Carna (04-154)
MAPK14 (p38α)	mitogen-activated protein kinase 14	NM_001315	p38a	S/T	MAPK	CSKS-AQT0649B CSKS-AQT0649K	2230.5	Carna (04-152)
MAPKAPK2 (MK2)	MAPK activated protein kinase 2	NM_004759	MAPKAPK2	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701K	1692.0	Carna (02-142)
MAPKAPK3 (MK3)	MAPK activated protein kinase 3	NM_004635	MAPKAPK3	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701K	1692.0	Carna (02-143)
MAPKAPK5 (MK5)	MAPK activated protein kinase 5	NM_003668	MAPKAPK5	S/T	MAPKAPK	CSKS-AQT0701B CSKS-AQT0701K	1692.0	Carna (02-144)
MASTL	microtubule associated serine/threonine kinase-like	NM_032844	MASTL	S/T	MAST	CSKS-AQT0703B CSKS-AQT0703K	2752.2	SignalChem (M72-10G)
MERTK (MER)	MER proto-oncogene, tyrosine kinase	NM_006343	MER	Y	Axl	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-108)
MET (c-MET, HGFR)	MET proto-oncogene, receptor tyrosine kinase	NM_000245	MET	Y	Met	CSKS-AQT0658B CSKS-AQT0658K	1366.6	Carna (08-151)
MST1R (RON)	macrophage stimulating 1 receptor	NM_016542	RON	Y	Met	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-152)

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NEK8	NIMA related kinase 8	NM_017810	NEK8	S/T	NEK	CSKS-AQT0349B CSKS-AQT0349K	2673.15	
NTRK1 (TRKA)	neurotrophic receptor tyrosine kinase 1	NM_002529	TRKA	Y	Trk	CSKS-AQT0515B CSKS-AQT0515K	1585.9	BPS (BS40280)
NTRK2 (TRKB)	neurotrophic receptor tyrosine kinase 2	NM_006180	TRKB	Y	Trk	CSKS-AQT0515B CSKS-AQT0515K	1585.9	BPS (BS40281)
NTRK3 (TRKC)	neurotrophic receptor tyrosine kinase 3	NM_002530	TRKC	Y	Trk	CSKS-AQT0515B CSKS-AQT0515K	1585.9	BPS (BS40282)
NUAK1 (ARK5)	NUAK family kinase 1	NM_014840	NuaK1	S/T	CAMKL	CSKS-AQT0395B CSKS-AQT0395K	1743.0	Carna (02-126)
NUAK2 (SNARK)	NUAK family kinase 2	NM_030952	NuaK2	S/T	CAMKL	CSKS-AQT0395B CSKS-AQT0395K	1743.0	Carna (02-127)
PAK1	p21 (RAC1) activated kinase 1	NM_002576	PAK1	S/T	STE20	CSKS-AQT0838B CSKS-AQT0838K	1424.6	Carna (07-123)
PAK2	p21 (RAC1) activated kinase 2	NM_002577	PAK2	S/T	STE20	CSKS-AQT0839B CSKS-AQT0839K	1521.7	Carna (07-124)
PAK3	p21 (RAC1) activated kinase 3	NM_002578	PAK3	S/T	STE20	CSKS-AQT0845B CSKS-AQT0845K	1936.2	Carna (07-125)
PAK4	p21 (RAC1) activated kinase 4	NM_005884	PAK4	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840K	1537.8	INVT (PV4212)
PAK5 (PAK7)	p21 (RAC1) activated kinase 5	NM_020341	PAK5	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840K	1537.8	SignalChem (P07-10G)
PAK6	p21 (RAC1) activated kinase 6	NM_020168	PAK6	S/T	STE20	CSKS-AQT0840B CSKS-AQT0840K	1537.8	Carna (07-128)
PBK (TOPK)	PDZ binding kinase	NM_018492	PBK	S/T	TOPK	CSKS-AQT0766B CSKS-AQT0766K	2525.0	Invitrogen (PV4130)
PDGFRA (PDGFRA)	platelet derived growth factor receptor alpha	NM_006206	PDGFRA	Y	PDGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-157)
PDGFRB (PDGFRB)	platelet derived growth factor receptor beta	NM_002609	PDGFRB	Y	PDGFR	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-158)
PKN1	protein kinase N1	NM_002741	PKN1	S/T	PKN	CSKS-AQT0509B CSKS-AQT0509K	2067.4	Carna (01-144)
PKN2	protein kinase N2	NM_006256	PKN2	S/T	PKN	CSKS-AQT0462B CSKS-AQT0462K	1648.0	Carna (01-145)
PKN3	protein kinase N3	NM_013355	PKN3	S/T	PKN	CSKS-AQT0509B CSKS-AQT0509K	2067.4	Carna (01-146)
PRKAA1-B1-G1 (AMPKα1β1γ1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	Carna (02-113)
PRKAA1-B1-G2 (AMPKα1β1γ2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P55-10G)
PRKAA1-B1-G3 (AMPKα1β1γ3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P56-10H)
PRKAA1-B2-G1 (AMPKα1β2γ1)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	Carna (02-147)
PRKAA1-B2-G2 (AMPKα1β2γ2)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P45-10G)
PRKAA1-B2-G3 (AMPKα1β2γ3)	protein kinase AMP-activated catalytic subunit alpha 1	NM_006251	AMPKα1	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P83-10G)
PRKAA2-B1-G1 (AMPKα2β1γ1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	Carna (02-114)
PRKAA2-B1-G2 (AMPKα2β1γ2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P84-10GH)
PRKAA2-B1-G3 (AMPKα2β1γ3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P85-10GH)
PRKAA2-B2-G1 (AMPKα2β2γ1)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	Carna (02-148)
PRKAA2-B2-G2 (AMPKα2β2γ2)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P54-10H)
PRKAA2-B2-G3 (AMPKα2β2γ3)	protein kinase AMP-activated catalytic subunit alpha 2	NM_006252	AMPKα2	S/T	CAMKL	CSKS-AQT0420B CSKS-AQT0420K	1821.2	SignalChem (P46-10GH)
PRKD1 (PKD1)	protein kinase D1	NM_002742	PKD1	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-157)
PRKD2 (PKD2)	protein kinase D2	NM_016457	PKD2	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-158)
PRKD3 (PKD3)	protein kinase D3	NM_005813	PKD3	S/T	PKD	CSKS-AQT0694B CSKS-AQT0694K	1466.8	Carna (02-159)
PRKG1 (PKG1, PGK)	protein kinase cGMP-dependent I	NM_006258	DNAPK	S/T	PIKK	CSKS-AQT0324B CSKS-AQT0324K	1863.3	Carna (01-142)
PTK2 (FAK)	protein tyrosine kinase 2	NM_153831	FAK	Y	FAK	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-137)
PTK2B (PYK2)	protein tyrosine kinase 2 beta	NM_004103	PYK2	Y	FAK	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-138)

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
PTK6 (BRK)	protein tyrosine kinase 6	NM_005975	BRK	Y	Src	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-165)
BRAF (V600E)	B-Raf proto-oncogene, serine/threonine kinase	NM_004333	BRAF	S/T	RAF	CSKS-AQT0682B CSKS-AQT0682K	2715.0	Thermo (PR7304A)
RAF1 (Y340E/Y341E)	Raf-1 proto-oncogene, serine/threonine kinase	NM_002880	RAF1	S/T	RAF	CSKS-AQT0688B CSKS-AQT0688K	2688.0	Signal Chem (R01-13G-10)
RET	ret proto-oncogene	NM_020975	RET	Y	Ret	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-159)
RIPK2	receptor interacting serine/threonine kinase 2	NM_003821	RIPK2	S/T	RIPK	CSKS-AQT0205B CSKS-AQT0205K	3110.6	SC(R08-11G)
ROCK1	Rho associated coiled-coil containing protein kinase 1	NM_005406	ROCK1	S/T	DMPK	CSKS-AQT0537B CSKS-AQT0537K	1509.8	Carna (01-109)
ROCK2	Rho associated coiled-coil containing protein kinase 2	NM_004850	ROCK2	S/T	DMPK	CSKS-AQT0421B CSKS-AQT0421K	1464.8	Carna (01-110)
ROS1 (ROS)	ROS proto-oncogene 1, receptor tyrosine kinase	NM_002944	ROS	Y	Sev	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-163)
RPS6KA1 (RSK1)	ribosomal protein S6 kinase A1	NM_002953	RSK3	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535K	1945.2	Carna (01-149)
RPS6KA2 (RSK3)	ribosomal protein S6 kinase A2	NM_021135	RSK1	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535K	1945.2	Carna (01-151)
RPS6KA3 (RSK2)	ribosomal protein S6 kinase A3	NM_004586	RSK2	S/T	RSK	CSKS-AQT0233B CSKS-AQT0233K	1488.7	Carna (01-150)
RPS6KB1 (p70S6K)	ribosomal protein S6 kinase B1	NM_003161	p70S6K	S/T	RSK	CSKS-AQT0535B CSKS-AQT0535K	1945.2	Carna (01-158)
SGK1 (SGK)	serum/glucocorticoid regulated kinase 1	NM_005627	SGK	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566K	1295.4	Thermo (PV3818)
SGK2	serum/glucocorticoid regulated kinase 2	NM_016276	SGK2	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566K	1295.4	Carna (01-159)
SGK3	serum/glucocorticoid regulated kinase family member 3	NM_013257	SGK3	S/T	SGK	CSKS-AQT0566B CSKS-AQT0566K	1295.4	Carna (01-160)
SIK3 (QSK)	salt inducible kinase 3	BC128510.1	QSK	S/T	CAMKL	CSKS-AQT0508B CSKS-AQT0508K	2040.4	Dundee/MRC (DU 16623)
SRC	SRC proto-oncogene, non-receptor tyrosine kinase	NM_005417	SRC	Y	Src	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-173)
SRMS (SRM)	SRC-related kinase lacking C-terminal regulatory tyrosine and N-terminal myristylation sites	NM_080823	SRM	Y	Src	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-174)
SYK	spleen associated tyrosine kinase	NM_003177	SYK	Y	Syk	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-176)
TBK1	TANK binding kinase 1	NM_013254	TBK1	S/T	IKK	CSKS-AQT0897B CSKS-AQT0897K	2573.9	Carna (05-115)
TEC	tec protein tyrosine kinase	NM_003215	TEC	Y	Tec	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-182)
TEK (TIE2)	TEK receptor tyrosine kinase	NM_000459	TIE2	Y	Tie	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-185)
TLK1	tousled like kinase 1	NM_012290	TLK1	S/T	TLK	CSKS-AQT0683B CSKS-AQT0683K	2616.9	Carna (05-166)
TLK2	tousled like kinase 2	NM_006852	TLK2	S/T	TLK	CSKS-AQT0683B CSKS-AQT0683K	2616.9	Carna (05-167)
TNIK (ZC2)	TRAF2 and NCK interacting kinase	NM_015028	ZC2/TNIK	S/T	STE20	CSKS-AQT0135B CSKS-AQT0135K	2563.9	Carna (07-138)
TNK1	tyrosine kinase non receptor 1	NM_003985.4	TNK1	Y	Ack	CSKS-AQT0515B CSKS-AQT0515K	1585.9	SignalChem (T12-11G)
TNK2 (ACK)	tyrosine kinase non receptor 2	NM_005781	ACK	Y	Ack	CSKS-AQT0515B CSKS-AQT0515K	1585.9	SignalChem (A05-11G)
TXK	TXK tyrosine kinase	NM_003328	TXK	Y	Tec	CSKS-AQT0653B CSKS-AQT0653K	2022.4	Carna (08-183)
TYK2 [JH1]	tyrosine kinase 2	NM_003331	TYK2	Y	Jak	CSKS-AQT0663B CSKS-AQT0663K	1341.6	Carna (08-147)
TYRO3	TYRO3 protein tyrosine kinase	NM_006293	TYRO3	Y	Axl	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-109)
ULK3	unc-51 like autophagy activating kinase 3	NM_015518	ULK3	S/T	ULK	CSKS-AQT0683B CSKS-AQT0683K	2616.9	Carna (05-173)
YES1 (YES)	YES proto-oncogene 1, Src family tyrosine kinase	NM_005433	YES	Y	Src	CSKS-AQT0515B CSKS-AQT0515K	1585.9	Carna (08-175)
ZAP70	zeta chain of T cell receptor associated protein kinase 70	NM_001079	ZAP70	Y	Syk	CSKS-AQT0653B CSKS-AQT0653K	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: 168*	

\*We are actively developing companion Red-Shift TRF Sensor Peptides for each of our Continuous FI Sensor Peptides.  
Please inquire if your target is not listed in the table above.

Table 2.

PhosphoSens Buffers and Reagents			
Product Number	Component	Description	Volume
AQT100XATP	ATP solution, 100X	100mM ATP in nuclease-free water	1.5mL
AQT1000XDTT	DTT solution, 1000X	1M DTT in nuclease-free water	0.15mL
AQT10XERB	Enzyme Reaction Buffer, 10X	500mM HEPES, pH 7.5, 0.1% Brij-35, 100mM MgCl <sub>2</sub>	15mL
AQT1XEDB	Enzyme Dilution Buffer, 1X	20mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin	35mL
AQT1000XEGTA	EGTA solution, 1000X	0.55M EGTA in 2M NaOH	0.15mL
AQT6XEUR	Europium (III), 6x	30mM Europium (III) in 0.6mM HCl	35mL