

PhosphoSens® Product Summary

PhosphoSens® Sox-based Homogeneous, Kinetic and Endpoint/Red Fluorescence-based Assays

Continuous format that uses Fluorescence Intensity, with an Ex/Em wavelength of 360/485-505 nm and allows **kinetic** monitoring of the activity of a kinase or phosphatase **from the same add and read reaction without manual timepoints**.

Red/Endpoint - A new innovation that uses Europium (Eu³⁺) with time-resolved fluorescence (TRF) and an Ex/Em wavelength of 360/610-620 nm. The >600 nm wavelength and the ability to use a 100 usec delay, eliminates compound autofluorescence, while still using a small and minimally hydrophobic fluorophore. Both formats can be performed with the same optimized Sox-sensors, and assays can be run at any ATP concentration.

Products & Services

Assay Kits include all required reagents besides the kinase, allowing 96 reactions (using 50 µL as a final reaction volume in a half-area 96-well plate and 10 µM final substrate) or 192 reactions (using 25 µL as a final reaction volume in a low-volume 384-well plate and 10 µM final substrate).

Bulk Sensor pricing starts at 1 mg net and allows 1,200 assays on average using 25 µL as a final reaction volume in a low-volume 384-well plate and 10 µM final substrate. **We provide** steep discounts with increasing scale.

Custom Assay Development Services are performed under a Master Service Agreement, with 3 Milestones for a recombinant assay and 4-5 Milestones (1-2 additional beyond a recombinant assay) for a crude cell or tissue lysate assay.

Custom Testing Services including kinase profiling and IC₅₀, K_i, inact/K_i, Residence Time and Mechanism of Action (MOA) determinations.

368 Protein Kinase Assays 108 Tyr, 240 Ser/Thr, & 4 Tyr/Ser/Thr Kinases

	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments or Alternative Sensors
1	ABL1	Y	Soluble	Carna (08-001)	AQT0032	1673.8	10	VS	AQT0031
2	ABL1 [E255K]	Y	Soluble	Carna (08-094)	AQT0032	1673.8	10	VS	AQT0031
3	ABL1 [T315I]	Y	Soluble	Carna (08-093)	AQT0032	1673.8	10	VS	AQT0031
4	ABL2 (ARG)	Y	Soluble	Carna (08-102)	AQT0032	1673.8	10	VS	AQT0031
5	AKT1 (PKB)	S/T	AGC	Carna (01-101)	AQT0536	1469.7	10	VS	AQT0233, 535
6	AKT2 (PKBβ)	S/T	AGC	Carna (01-102)	AQT0536	1469.7	10	VS	AQT0233, 535
7	AKT3 (PKBγ)	S/T	AGC	Carna (01-103)	AQT0536	1469.7	10	VS	AQT0233, 535
8	ALK	Y	Receptor	Carna (08-518)	AQT0101	1384.6	10	VS	
9	ALK [C1156Y]	Y	Receptor	Carna (08-530)	AQT0101	1384.6	10	VS	
10	ALK [F1174L]	Y	Receptor	Carna (08-519)	AQT0101	1384.6	10	VS	
11	ALK [G1269A]	Y	Receptor	Carna (08-537)	AQT0101	1384.6	10	VS	
12	ALK [G1202R]	Y	Receptor	Carna (08-544)	AQT0101	1384.6	10	VS	
13	ALK [L1196M/G1202R]	Y	Receptor	SignalChem (A19-12NG)	AQT0101	1384.6	10	VS	
14	ALK [L1196M]	Y	Receptor	Carna (08-529)	AQT0101	1384.6	10	VS	
15	ALK [R1275Q]	Y	Receptor	Carna (08-520)	AQT0101	1384.6	10	VS	
16	ALK [T1151-L1152 INS T]	Y	Receptor	Carna (08-539)	AQT0101	1384.6	10	VS	
17	ALK:NPM1 (NPM1-ALK)	Y	Receptor	Carna (08-517)	AQT0101	1384.6	10	S	
18	AURKA (AURA)	S/T	Other	Carna (05-101)	AQT0186	1398.7	10	VS	
19	AURKB (AURB)	S/T	Other	Carna (05-102)	AQT0186	1398.7	10	VS	
20	AURKC (AURC)	S/T	Other	Carna (05-103)	AQT0186	1398.7	10	VS	
21	AXL	Y	Receptor	Carna (08-107)	AQT0101	1384.6	10	VS	
22	BLK	Y	Soluble	Carna (08-164)	AQT0032	1673.8	10	VS	
23	BMX	Y	Soluble	Carna (08-179)	AQT0104	1361.5	10	VS	AQT0101
24	BRSK1	S/T	CAMK	Carna (02-115)	AQT0123	3012.5	15	S	
25	BRSK2	S/T	CAMK	Carna (02-116)	AQT0123	3012.5	15	S	
26	BTK	Y	Soluble	Carna (08-180)	AQT0101	1384.6	10	VS	AQT0104
27	BTK [C481S]	Y	Soluble	Carna (08-547)	AQT0101	1384.6	10	VS	

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.

	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments or Alternative Sensors
28	BUB1	S/T	Other	Carna (05-187)	AQT0848	2559.0	15	M	AQT0667
29	CAMK1A (CAMK1 α)	S/T	CAMK	Carna (02-104)	AQT0426	1798.1	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
30	CAMK1D (CAMK1 δ)	S/T	CAMK	SignalChem (C09-10G)	AQT0420	1821.2	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
31	CAMK1G (CAMK1 γ)	S/T	CAMK	SignalChem (C10-11G)	AQT0420	1821.2	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
32	CAMK2A (CAMK2 α)	S/T	CAMK	Carna (02-109)	AQT0425	2143.5	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
33	CAMK2B (CAMK2 β)	S/T	CAMK	Carna (02-110)	AQT0425	2143.5	10	VS	
34	CAMK2D (CAMK2 δ)	S/T	CAMK	Carna (02-111)	AQT0425	2143.5	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
35	CAMK2G (CAMK2 γ)	S/T	CAMK	Carna (02-112)	AQT0425	2143.5	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
36	CAMK4	S/T	CAMK	Carna (02-108)	AQT0426	1798.1	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
37	CAMKK1	S/T	Other	Carna (05-157)	AQT0699	3488.9	15	S	5 ng/ μ l CaM, 0.4 mM CaCl ₂
38	CDC42BPB (MRCKB)	S/T	AGC	Carna (01-108)	AQT0713	1342.6	15	M	
39	CDC42BPG (DMPK2)	S/T	AGC	SignalChem (D17-11G)	AQT0324	1863.3	15	S	
40	CDK1/CycB1(CDC2)	S/T	CMGC	Carna(04-102)	AQT0297	1401.5	10	VS	
41	CDK1/CycE1	S/T	CMGC	Proqinase (0134-0055-1)	AQT0297	1401.5	10	VS	
42	CDK2/CycA2	S/T	CMGC	Carna (04-103)	AQT0297	1401.5	10	VS	
43	CDK2/CycE1	S/T	CMGC	Carna (04-165)	AQT0297	1401.5	10	VS	
44	CDK3/CycE1	S/T	CMGC	Carna (04-104)	AQT0297	1401.5	10	VS	AQT0296
45	CDK4 /CycD3	S/T	CMGC	Carna (04-105)	AQT0258	2506.9	10	S	
46	CDK5/p25	S/T	CMGC	Carna (04-106)	AQT0255	1449.6	10	VS	
47	CDK5/p35	S/T	CMGC	SignalChem (C33-10BG)	AQT0255	1449.6	10	VS	
48	CDK6/CycD1	S/T	CMGC	Carna (04-114)	AQT0258	2506.9	10	VS	
49	CDK6/CycD3	S/T	CMGC	Carna (04-107)	AQT0258	2506.9	10	S	
50	CDK7/CycH/MAT1	S/T	CMGC	Carna (04-108)	AQT0733	3243.6	10	S	AQT0459
51	CDK9 (TAK) w/CycK	S/T	CMGC	Carna (04-111)	AQT0449	2581.0	15	M	
52	CDK9 (TAK) w/CycT1	S/T	CMGC	Carna (04-110)	AQT0449	2581.0	10	VS	
53	CDK14 (PPTAIRE1)/CycY	S/T	CMGC	SignalChem (P15-10G)	AQT0730	2578.0	15	M	
54	CDK16/CycY	S/T	CMGC	Carna (04-116)	AQT0258	2506.9	10	S	
55	CDK17 (PCTAIRE2)/CycY	S/T	CMGC	SignalChem (P10-10G)	AQT0730	2578.0	15	S	
56	CDK18/CycY (PCTAIRE3)	S/T	CMGC	Thermo (A30492)	AQT0255	1449.6	10	S	
57	CDPK1 (toxoplasma gondii)	S/T	CAMK	Academic Lab	AQT0124	1748.0	10	VS	
58	CDPK3 (toxoplasma gondii)	S/T	CAMK	Academic Lab	AQT0124	1748.0	10	VS	
59	CHAK1 (TRPM7)	S/T	Atypical	Carna (10-111)	AQT0349	2699.0	15	VS	
60	CHEK1 (CHK1)	S/T	CAMK	Carna (02-117)	AQT0694	1466.8	10	VS	
61	CHEK2 (CHK2)	S/T	CAMK	Carna (02-162)	AQT0694	1466.8	10	VS	
62	CHUK (IKK α , IKK α)	S/T	Other	Carna (05-112)	AQT0603	2501.7	10	M	AQT0806
63	CIT (CRIK)	S/T	AGC	Carna (01-104)	AQT0694	1466.8	15	M	
64	CLK1	S/T	CMGC	SignalChem (C57-11G)	AQT0360	2741.0	15	S	
65	CLK2	S/T	CMGC	Carna (04-127)	AQT0360	2741.0	15	VS	
66	CLK3	S/T	CMGC	Carna (04-128)	AQT0360	2741.0	15	VS	
67	CSF1R (FMS)	Y	Receptor	Carna (08-155)	AQT0104	1361.5	10	VS	AQT0026
68	CSK	Y	Soluble	Carna (08-111)	AQT0101	1384.6	15	M	
69	CSNK1A1 (CK1A1, CK1 α)	S/T	CK1	Carna (03-101)	AQT0709	1889.1	10	VS	ST24
70	CSNK1A1L (CK1A1L, CK1 α 2)	S/T	CK1	SignalChem (C75-10G)	AQT0709	1889.1	15	VS	ST24
71	CSNK1D (CK1D, CK1 δ)	S/T	CK1	Carna (03-103)	AQT0709	1889.1	10	VS	ST24
72	CSNK1E (CK1E, CK1 ϵ)	S/T	CK1	Carna (03-104)	AQT0709	1889.1	10	VS	ST24
73	CSNK1G1 (CK1G1, CK1 γ 1)	S/T	CK1	Carna (03-105)	AQT0709	1889.1	10	VS	ST24
74	CSNK1G2 (CK1G2, CK1 γ 2)	S/T	CK1	Carna (03-106)	AQT0709	1889.1	15	VS	ST24
75	CSNK1G3 (CK1G3, CK1 γ 3)	S/T	CK1	Carna (03-107)	AQT0709	1889.1	15	VS	ST24
76	CSNK2A1 (CK2A1, CK2 α 1)	S/T	Other	Thermo (PV3248)	AQT0696	2314.2	10	VS	
77	CSNK2A2 (CK2A2, CK2 α 2)	S/T	Other	Thermo (PV3624)	AQT0696	2314.2	10	S	
78	DAPK1	S/T	CAMK	SignalChem (D01-11G)	AQT0173	2438.9	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
79	DAPK2 (DRP-1)	S/T	CAMK	SignalChem (D02-10G)	AQT0236	2476.9	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
80	DAPK3 (ZIPK)	S/T	CAMK	Carna (02-136)	AQT0237	2444.8	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
81	DCLK1 (DCAMKL1)	S/T	CAMK	Carna (02-139)	AQT0426	1798.1	15	S	5 ng/ μ l CaM, 0.4 mM CaCl ₂
82	DCLK2 (DCAMKL2)	S/T	CAMK	Carna (02-140)	AQT0426	1798.1	15	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
83	DDR1 (SRC treated)	Y	Receptor	Carna (08-132)	AQT0235	1830.1	10	M	

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.
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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
84	DDR2	Y	Receptor	Carna (08-114)	AQT0235	1830.1	10	VS	Activated (+0.5nM SRC)
85	DYRK1A	S/T	CMGC	Carna (04-130)	AQT0260	1608.9	10	VS	
86	DYRK1B	S/T	CMGC	Carna (04-131)	AQT0260	1608.9	10	VS	
87	DYRK2	S/T	CMGC	Carna (04-132)	AQT0260	1608.9	10	VS	
88	DYRK3	S/T	CMGC	Carna (04-133)	AQT0260	1608.9	10	VS	
89	DYRK4	S/T	CMGC	Carna (04-434)	AQT0260	1608.9	10	VS	
90	EEF2K (eEF2K)	S/T	Atypical	Carna (10-113)	AQT0349	2699.0	15	VS	5 ng/μl CaM, 0.4 mM CaCl ₂
91	EGFR (ERBB1)	Y	Receptor	BPS (40187)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
92	EGFR (D770_N771insNPG)	Y	Receptor	Carna (08-553)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
93	EGFR [C797S/L858R]	Y	Receptor	SignalChem (E10-122ZG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
94	EGFR [d746-750/C797S/T790M]	Y	Receptor	SignalChem (E10-122UG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
95	EGFR [d746-750/C797S]	Y	Receptor	SignalChem (E10-122TG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
96	EGFR [d746-750/T790M]	Y	Receptor	SignalChem (E10-122KG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
97	EGFR [d746-750]	Y	Receptor	Carna (08-527)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
98	EGFR [L858R]	Y	Receptor	SignalChem (E10-122BG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
99	EGFR [L861Q]	Y	Receptor	Carna (08-513)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
100	EGFR [T790M/C797S/L858R]	Y	Receptor	SignalChem (E10-122VG)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
101	EGFR [T790M/L858R]	Y	Receptor	Carna (08-510)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
102	EGFR [T790M]	Y	Receptor	Carna (08-194)	AQT0734	1528.7	10	VS	AQT0001, 99, 702
103	EIF2AK1 (HRI)	S/T	Other	Carna (05-154)	AQT0748	2603.1	15	M	
104	EIF2AK2 (PKR), Full length	S/T	Other	Academic Lab	AQT0355	2704.7	10	VS	Activated (+ poly(rI:C))
105	EIF2AK3 (PERK/PEK)	S/T	Other	Carna (05-155)	AQT0356	2713.0	10	VS	
106	EIF2AK4 (GCN2)	S/T	Other	Carna (05-153)	AQT0349	2699.0	10	VS	Activated (+ tRNA)
107	EPHA1	Y	Receptor	Carna (08-119)	AQT0101	1384.6	10	VS	AQT0025
108	EPHA2	Y	Receptor	Carna (08-121)	AQT0104	1361.5	10	VS	AQT0026
109	EPHA3	Y	Receptor	Carna (08-122)	AQT0104	1361.5	10	VS	AQT0026
110	EPHA4	Y	Receptor	Carna (08-123)	AQT0104	1361.5	10	VS	AQT0026
111	EPHA5	Y	Receptor	Carna (08-124)	AQT0104	1361.5	10	VS	AQT0026
112	EPHA6	Y	Receptor	Carna (08-125)	AQT0104	1361.5	10	VS	AQT0026
113	EPHA7	Y	Receptor	Carna (08-126)	AQT0102	1268.2	10	VS	
114	EPHA8	Y	Receptor	Carna (08-127)	AQT0104	1361.5	10	VS	AQT0026
115	EPHB1	Y	Receptor	Carna (08-128)	AQT0101	1384.6	10	VS	AQT0025
116	EPHB2	Y	Receptor	Carna (08-129)	AQT0101	1384.6	10	VS	AQT0025
117	EPHB3	Y	Receptor	Carna (08-130)	AQT0101	1384.6	10	VS	AQT0025
118	EPHB4	Y	Receptor	Carna (08-131)	AQT0101	1384.6	10	VS	AQT0025
119	ERBB2 (HER2)	Y	Receptor	BPS (40230)	AQT0794	2339.5	10	VS	AQT0001, 702
120	ERBB2 (HER2) [A775/G776insYVMA]	Y	Receptor	SignalChem (E27-13BG)	AQT0794	2339.5	10	VS	AQT0001, 702
121	ERBB4 (HER4)	Y	Receptor	Carna (08-118)	AQT0794	2339.5	10	VS	AQT001, 702
122	ERN1 (IRE1)	S/T	Other	Thermo (A30971)	AQT0715	2775.2	15	S	
123	ERN2 (IRE2)	S/T	Other	SignalChem (E32-11G)	AQT0715	2775.2	15	M	
124	FAM20C	S/T	Other	SignalChem (F18-11G)	AQT0698	1891.8	15	S	
125	FER	Y	Soluble	Carna (08-139)	AQT0104	1361.5	10	VS	AQT0026
126	FES	Y	Soluble	Carna (08-140)	AQT0104	1361.5	10	VS	AQT0026
127	FGFR1	Y	Receptor	Carna (08-133)	AQT0101	1384.6	10	VS	
128	FGFR2	Y	Receptor	Carna (08-134)	AQT0101	1384.6	10	VS	
129	FGFR3	Y	Receptor	Carna (08-135)	AQT0101	1384.6	10	VS	
130	FGFR3 [G697C]	Y	Receptor	Proqinase (1071-0000-1)	AQT0101	1384.6	10	S	
131	FGFR3 [K650E]	Y	Receptor	Carna (08-501)	AQT0101	1384.6	10	VS	
132	FGFR3 [K650M]	Y	Receptor	Carna (08-199)	AQT0101	1384.6	10	VS	
133	FGFR3 [V555L]	Y	Receptor	Carna (08-548)	AQT0101	1384.6	10	VS	
134	FGFR3 [V555M]	Y	Receptor	Carna (08-543)	AQT0101	1384.6	10	VS	
135	FGFR4	Y	Receptor	Carna (08-136)	AQT0101	1384.6	10	VS	
136	FGR	Y	Soluble	Carna (08-166)	AQT0032	1673.8	10	VS	
137	FLT1	Y	Receptor	Carna (08-189)	AQT0001	1431.3	10	VS	
138	FLT3	Y	Receptor	Carna (08-154)	AQT0101	1384.6	10	VS	

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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
139	FLT4	Y	Receptor	Carna (08-190)	AQT0001	1431.3	10	VS	
140	FRK	Y	Soluble	Carna (08-167)	AQT0101	1384.6	10	VS	AQT0026
141	FYNa	Y	Soluble	Carna (08-168)	AQT0104	1361.5	10	VS	AQT0101
142	FYNb	Y	Soluble	Carna (08-531)	AQT0104	1361.5	10	VS	AQT0101
143	GRK1 (RHOK)	S/T	AGC	SignalChem (R03-10G)	AQT0603	2501.7	15	S	
144	GRK2 (ADRBK1, BARK1)	S/T	AGC	Thermo (PV3361)	AQT0641	3339.6	15	VS	
145	GRK3 (ADRBK2, BARK2)	S/T	AGC	Carna (01-112)	AQT0641	3339.6	15	S	
146	GRK4 (GPRK4)	S/T	AGC	Carna (01-313)	AQT0641	3339.6	15	M	
147	GRK5 (GPRK5)	S/T	AGC	SignalChem (G03-10G)	AQT0641	3339.6	15	M	
148	GRK7 (GPRK7)	S/T	AGC	Carna (01-316)	AQT0641	3339.6	15	S	
149	GSK3A (GSK3 α)	S/T	CMGC	Carna (04-140)	AQT0157	2004.7	10	VS	
150	GSK3B (GSK3 β)	S/T	CMGC	Carna (04-141)	AQT0157	2004.7	10	VS	
151	HASPIN	S/T	Other	Carna (05-111)	AQT0798	1827.1	15	VS	
152	HCK	Y	Soluble	Carna (08-169)	AQT0101	1384.6	10	VS	AQT0026
153	HIPK1	S/T	CMGC	Carna (04-135)	AQT0849	1929.2	15	M	
154	HIPK2	S/T	CMGC	Carna (04-136)	AQT0134	2357.5	15	VS	
155	HIPK3	S/T	CMGC	Carna (04-137)	AQT0849	1929.2	15	M	
156	HIPK4	S/T	CMGC	Carna (04-138)	AQT0849	1929.2	15	M	
157	ICK	S/T	CMGC	Carna (04-156)	AQT0257	2011.4	10	S	
158	IGF1R	Y	Receptor	Carna (08-141)	AQT0101	1384.6	10	VS	AQT0025
159	IKKB (IKK β)	S/T	Other	Thermo (PV3836)	AQT0215	1474.6	10	VS	AQT0224, 220, 223
160	IKKE (IKK ϵ)	S/T	Other	Thermo (PV4875)	AQT0215	1474.6	10	VS	
161	INSR (IR)	Y	Receptor	Carna (08-142)	AQT0101	1384.6	10	VS	
162	INSRR (IRR)	Y	Receptor	Carna (08-143)	AQT0104	1361.5	10	VS	AQT0026
163	IRAK1	S/T	TKL	Carna (09-101)	AQT0326	2079.5	10	VS	
164	IRAK4	S/T	TKL	Carna (09-145)	AQT0326	2079.5	10	VS	
165	ITK	Y	Soluble	Thermo (PV3875)	AQT0101	1384.6	10	VS	AQT0104
166	JAK1 [JH1]	Y	Soluble	Thermo (PV4774)	AQT0663	1341.6	10	S	AQT0001, 661
167	JAK1 [JH1-JH2]	Y	Soluble	SignalChem (J01-11G)	AQT0663	1341.6	10	S	AQT0001, 661
168	JAK2 [JH1]	Y	Soluble	Carna (08-045)	AQT0661	1381.6	10	VS	AQT0101
169	JAK2 [JH1-JH2]	Y	Soluble	Carna (08-514)	AQT0661	1381.6	10	VS	AQT0101
170	JAK3 [JH1]	Y	Soluble	Carna (08-046)	AQT0658	1367.6	10	VS	AQT0101, 661
171	KDR (VEGFR2)	Y	Receptor	Carna (08-191)	AQT0101	1384.6	10	VS	AQT0007
172	KIT	Y	Receptor	Carna (08-156)	AQT0102	1268.2	10	VS	
173	KSR1	S/T	TKL	SignalChem (J01-11G)	AQT0694	1466.8	15	M	
174	KSR2	S/T	TKL	SignalChem (J01-11G)	AQT0694	1466.8	15	S	
175	LATS1	S/T	AGC	Carna (01-123)	AQT0476	2349.7	10	VS	
176	LATS2	S/T	AGC	Carna (01-124)	AQT0476	2349.7	10	VS	
177	LCK	Y	Soluble	Carna (08-170)	AQT0104	1361.5	10	VS	AQT0101
178	LRRK2	S/T	TKL	Thermo (PV48783)	AQT0615	2818.2	10	VS	
179	LRRK2 [G2019S]	S/T	TKL	Thermo (PV4881)	AQT0615	2818.2	10	VS	
180	LTK	Y	Soluble	Carna (08-106)	AQT0104	1361.5	10	VS	AQT0026
181	LYNa	Y	Soluble	Carna (08-171)	AQT0104	1361.5	10	VS	AQT0026
182	LYNb	Y	Soluble	Carna (08-172)	AQT0104	1361.5	10	VS	AQT0026
183	MAK	S/T	CMGC	SignalChem (M01-10G)	AQT0257	2011.4	10	S	
184	MAP3K1 (MEKK1)	S/T	STE	Carna (07-103)	AQT0739	2613.1	15	M	
185	MAP3K2 (MEKK2)	S/T	STE	SignalChem (M10-10G)	AQT0739	2613.1	15	M	
186	MAP3K3 (MEKK3)	S/T	STE	Carna (07-105)	AQT0743	2114.5	15	M	
187	MAP3K5 (ASK1)	S/T	STE	SignalChem (M13-10G)	AQT0557	2120.5	10	VS	Uses full-length ASK1
188	MAP3K8 (Tpl2, COT)	S/T	TKL	Carna (07-301)	AQT0742	2243.0	10	VS	
189	MAP3K9 (MLK1)	S/T	TKL	Carna (09-115)	AQT0645	2778.3	10	VS	
190	MAP3K11 (MLK3)	S/T	TKL	Carna (09-017)	AQT0646	2769.2	15	M	
191	MAP3K19 (YSK4)	S/T	TKL	SignalChem (Y06-11G)	AQT0742	2243.0	15	VS	
192	MAP3K20 (MLK7, ZAK)	S/T	TKL	Carna (09-120)	AQT0742	2243.0	15	M	
193	MAP4K1 (HPK1)	S/T	STE	Thermo (PV6355)	AQT0505	2183.6	10	VS	AQT0135, 136, 176, 178

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.
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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
194	MAP4K2 (GCK)	S/T	STE	SignalChem (M24-10G)	AQT0505	2183.6	10	VS	
195	MAP4K3 (GLK, KHS2)	S/T	STE	SignalChem (M25-11G)	AQT0505	2183.6	10	S	
196	MAP4K4 (HGK, ZC1)	S/T	STE	Carna (07-137)	AQT0135	2563.7	10	VS	
197	MAP4K5 (KHS1)	S/T	STE	SignalChem (M27-10G)	AQT0178	1434.7	10	VS	
198	MAPK1 (ERK2)	S/T	CMGC	Carna (04-143)	AQT0490	2089.4	5	VS	AQT0376
199	MAPK3 (ERK1)	S/T	CMGC	Carna (04-142)	AQT0490	2089.4	5	VS	AQT0376
200	MAPK7 (ERK5)	S/T	CMGC	Carna (04-146)	AQT0373	3610.3	5	VS	
201	MAPK8 (JNK1)	S/T	CMGC	Carna (04-163)	AQT0365	3140.6	5	VS	
202	MAPK9 (JNK2)	S/T	CMGC	Carna (04-164)	AQT0365	3140.6	5	VS	
203	MAPK10 (JNK3)	S/T	CMGC	Carna (04-150)	AQT0365	3140.6	5	VS	
204	MAPK11 (p38β)	S/T	CMGC	Carna (04-153)	AQT0490	2089.4	5	VS	
205	MAPK12 (p38γ)	S/T	CMGC	Carna (04-155)	AQT0490	2089.4	5	VS	
206	MAPK13 (p38δ)	S/T	CMGC	Carna (04-154)	AQT0490	2089.4	5	VS	
207	MAPK14 (p38α)	S/T	CMGC	Carna (04-152)	AQT0490	2089.4	5	VS	
208	MAPKAPK2 (MK2)	S/T	CAMK	Carna (02-142)	AQT0426	1798.1	10	VS	
209	MAPKAPK3 (MK3)	S/T	CAMK	Carna (02-143)	AQT0425	2143.5	10	VS	
210	MAPKAPK5 (MK5)	S/T	CAMK	Carna (02-144)	AQT0490	2089.4	10	VS	
211	MARK1	S/T	CAMK	Carna (02-120)	AQT0393	2582.0	10	VS	
212	MARK2	S/T	CAMK	Carna (02-121)	AQT0393	2582.0	10	VS	
213	MARK3	S/T	CAMK	Carna (02-122)	AQT0393	2582.0	10	VS	
214	MARK4	S/T	CAMK	Carna (02-123)	AQT0393	2582.0	10	VS	
215	MASTL	S/T	AGC	SignalChem (M72-10G)	AQT0693	2771.2	15	S	
216	MEK1 (MAP2K1), Cascade	S/T/Y	STE	Carna (07-141)	AQT0490	2089.4	5	VS	Uses inactive ERK2
217	MEK1 (MAP2K1), Direct	S/T/Y	STE	Carna (07-141)	AQT0855	1837.1	15	VS	
218	MEK2 (MAP2K2), Cascade	S/T/Y	STE	Carna (07-142)	AQT0490	2089.4	5	VS	Uses inactive ERK2
219	MEK2 (MAP2K2), Direct	S/T/Y	STE	Carna (07-142)	AQT0855	1837.1	15	VS	
220	MELK	S/T	CAMK	Carna (02-124)	AQT0426	1798.1	15	VS	5 ng/μl CaM, 0.4 mM CaCl ₂
221	MERTK (MER)	Y	Receptor	Carna (08-108)	AQT0101	1384.6	10	VS	
222	MET (c-MET, HGFR)	Y	Receptor	Carna (08-151)	AQT0104	1361.5	10	VS	
223	MINK1 (ZC3)	S/T	STE	SignalChem (M53-11G)	AQT0183	1354.7	10	VS	
224	MNK1	S/T	CAMK	SignalChem (M54-10G)	AQT0426	1798.1	15	VS	
225	MNK2	S/T	CAMK	SignalChem (M55-10G)	AQT0426	1798.1	15	VS	
226	MST1R (RON)	Y	Receptor	Carna (08-152)	AQT0734	1528.7	10	VS	AQT0001
227	MUSK	Y	Receptor	Carna (08-153)	AQT0101	1384.6	15	S	
228	MYLK (MLCK)	S/T	CAMK	SignalChem (M62-11G)	AQT0151	2342.5	15	S	5 ng/μl CaM, 0.4 mM CaCl ₂
229	MYLK2	S/T	CAMK	SignalChem (M63-10H)	AQT0517	2413.8	10	VS	5 ng/μl CaM, 0.4 mM CaCl ₂
230	MYO3A	S/T	STE	SignalChem (M65-11G)	AQT0505	2183.6	10	S	
231	MYO3B	S/T	STE	SignalChem (M66-11G)	AQT0135	2563.7	15	M	
232	NEK1	S/T	Other	Carna (05-123)	AQT0418	1450.5	10	VS	
233	NEK2	S/T	Other	Carna (05-226)	AQT0415	2724.1	10	VS	
234	NEK3	S/T	Other	Carna (05-127)	AQT0415	2724.1	15	M	
235	NEK4	S/T	Other	Carna (05-128)	AQT0418	1450.5	10	S	
236	NEK5	S/T	Other	SignalChem (N07-11G)	AQT0418	1450.5	15	VS	
237	NEK7	S/T	Other	Carna (05-131)	AQT0415	2724.1	15	M	
238	NEK9	S/T	Other	Carna (05-133)	AQT0415	2724.1	10	VS	
239	NEK10	S/T	Other	SignalChem (N12-11G)	AQT0415	2724.1	15	M	
240	NIM1 (NIM1K)	S/T	CAMK	SignalChem (N14-10G)	AQT0694	1466.8	15	S	
241	NLK (LAK1)	S/T	CMGC	Carna (04-151)	AQT0374	3570.3	15	S	
242	NTRK1 (TRKA)	Y	Receptor	BPS (B540280)	AQT0104	1361.5	10	VS	
243	NTRK2 (TRKB)	Y	Receptor	BPS (B540281)	AQT0104	1361.5	10	VS	
244	NTRK3 (TRKC)	Y	Receptor	BPS (B540282)	AQT0104	1361.5	10	VS	
245	NUAK1 (ARK5)	S/T	CAMK	Carna (02-126)	AQT0393	2582.0	10	VS	AQT0123, 392, 394, 395
246	NUAK2 (SNARK)	S/T	CAMK	Carna (02-127)	AQT0393	2582.0	10	VS	
247	PAK1	S/T	STE	Carna (07-123)	AQT0838	1424.6	15	S	
248	PAK2	S/T	STE	Carna (07-124)	AQT0838	1424.6	15	VS	
249	PAK3	S/T	STE	Carna (07-125)	AQT0838	1424.6	15	S	

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.
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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
250	PAK4	S/T	STE	SignalChem (P05-10BG)	AQT0840	1537.8	15	S	
251	PAK5 (PAK7)	S/T	STE	SignalChem (P07-10G)	AQT0840	1537.8	15	M	
252	PAK6	S/T	STE	Carna (07-128)	AQT0840	1537.8	15	M	
253	PBK (TOPK)	S/T	TKL	SignalChem (A05-11G)	AQT0766	2525.0	15	S	
254	PDGFRA (PDGFR α)	Y	Receptor	Carna (08-157)	AQT0734	1528.7	10	VS	AQT0001
255	PDGFRB (PDGFR β)	Y	Receptor	Carna (08-158)	AQT0101	1384.6	10	VS	AQT0025
256	PDK1 (PDHK1)	S/T	Atypical	SignalChem (P57-10G)	AQT0872	2346.6	15	M	10 mM KCl
257	PDK3 (PDHK3)	S/T	Atypical	SignalChem (P59-10G)	AQT0872	2346.6	15	M	10 mM KCl
258	PDK4 (PDHK4)	S/T	Atypical	Carna (10-125)	AQT0872	2346.6	15	S	10 mM KCl
259	PDPK1 (PDK1)	S/T	AGC	SignalChem (P14-10H)	AQT0126	1563.6	10	VS	
260	PHKG1	S/T	CAMK	Carna (02-152)	AQT0426	1798.1	10	S	5 ng/ μ l CaM, 0.4 mM CaCl ₂
261	PHKG2	S/T	CAMK	Carna (02-153)	AQT0426	1798.1	10	S	5 ng/ μ l CaM, 0.4 mM CaCl ₂
262	PIM1	S/T	CAMK	Carna (02-054)	AQT0474	1331.6	10	VS	AQT0230
263	PIM2	S/T	CAMK	Carna (02-055)	AQT0230	1393.6	10	VS	
264	PIM3	S/T	CAMK	Carna (02-056)	AQT0473	1331.6	10	VS	AQT0230
265	PINK1 (PINK)	S/T	Other	BOSTON BIO(AP-182)	AQT0686	2689.0	15	S	
266	PKN1	S/T	AGC	Carna (01-144)	AQT0462	1648.0	10	VS	
267	PKN2	S/T	AGC	Carna (01-145)	AQT0426	1798.1	10	VS	
268	PKN3	S/T	AGC	Carna (01-146)	AQT0509	2067.4	10	S	
269	PLK1	S/T	Other	BPS (40033)	AQT0691	2075.2	10	VS	
270	PLK3	S/T	Other	SignalChem (P43-13G)	AQT0691	2075.2	15	VS	
271	PLK4	S/T	Other	Thermo (PV6394)	AQT0686	2689.0	15	VS	
272	PNCK (CAMK1 β)	S/T	CAMK	Carna (02-105)	AQT0420	1821.2	10	VS	5 ng/ μ l CaM, 0.4 mM CaCl ₂
273	PRKAA1-B1-G1 (AMPK α 1 β 1y1)	S/T	CAMK	Carna (02-113)	AQT0426	1798.1	10	VS	1 mM AMP
274	PRKAA1-B2-G1 (AMPK α 1 β 2y1)	S/T	CAMK	Carna (02-147)	AQT0426	1798.1	10	VS	1 mM AMP
275	PRKAA2-B1-G1 (AMPK α 2 β 1y1)	S/T	CAMK	Carna (02-114)	AQT0426	1798.1	10	VS	1 mM AMP
276	PRKAA2-B2-G1 (AMPK α 2 β 2y1)	S/T	CAMK	Carna (02-148)	AQT0426	1798.1	10	VS	1 mM AMP
277	PRKACA (PKAC α)	S/T	AGC	Carna (01-127)	AQT0458	1124.4	10	VS	AQT0129, 186
278	PRKACB (PKAC β)	S/T	AGC	Carna (01-128)	AQT0458	1124.4	10	VS	AQT0129
279	PRKACG (PKACG, PKAC γ)	S/T	AGC	SignalChem (P53-10G)	AQT0231	1370.6	15	VS	AQT0667
280	PRKCA (PKC α [alpha])	S/T	AGC	Carna (01-133)	AQT0316	1544.9	10	VS	
281	PRKCB1 (PKC β 1 [beta1])	S/T	AGC	Carna (01-134)	AQT0316	1544.9	10	VS	
282	PRKCB2 (PKC β 2 [beta2])	S/T	AGC	Carna (01-165)	AQT0462	1648.0	10	VS	
283	PRKCD (PKC δ [delta])	S/T	AGC	Carna (01-135)	AQT0462	1648.0	10	VS	
284	PRKCE (PKC ϵ [epsilon])	S/T	AGC	Carna (01-136)	AQT0465	1618.9	10	VS	
285	PRKCG (PKC γ [gamma])	S/T	AGC	Carna (01-137)	AQT0316	1544.9	10	VS	
286	PRKCH (PKC η [eta])	S/T	AGC	Carna (01-138)	AQT0462	1648.0	10	VS	
287	PRKCI (PKC ι [iota])	S/T	AGC	Carna (01-139)	AQT0462	1648.0	10	VS	
288	PRKCK (PKC κ [kappa])	S/T	AGC	Carna (01-140)	AQT0465	1618.9	10	VS	
289	PRKCZ (PKC ζ [zeta])	S/T	AGC	Carna (01-141)	AQT0462	1648.0	10	VS	
290	PRKD1 (PKD1)	S/T	CAMK	Carna (02-157)	AQT0803	2372.8	10	VS	
291	PRKD2 (PKD2)	S/T	CAMK	Carna (02-158)	AQT0803	2372.8	10	VS	
292	PRKD3 (PKD3)	S/T	CAMK	Carna (02-159)	AQT0803	2372.8	10	VS	
293	PRKDC (DNA-PK)	S/T	Atypical	Thermo (PV5866)	AQT0439	1934.0	10	VS	
294	PRKG1 (PKG1, PGK)	S/T	AGC	Carna (01-142)	AQT0452	1525.8	10	VS	1 mM cGMP
295	PRKG2 (PKG2, PGK2, CGK2)	S/T	AGC	Carna (01-143)	AQT0452	1525.8	10	VS	1 mM cGMP
296	PRKX	S/T	AGC	Carna (01-130)	AQT0186	1398.7	15	S	
297	PTK2 (FAK)	Y	Soluble	Carna (08-137)	AQT0061	2122.9	20	S	Activated (+ 0.5nM Src)
298	PTK2B (PYK2)	Y	Soluble	Carna (08-138)	AQT0101	1384.6	10	VS	
299	PTK6 (BRK)	Y	Soluble	Carna (08-165)	AQT0101	1384.6	10	VS	
300	Raf, b- (V599E), Cascade	S/T	TKL	Thermo (PR7304A)	AQT0490	2089.4	5	VS	Uses inactive MEK1/ERK2
301	Raf, b- (V599E), Direct	S/T	TKL	Thermo (PR7304A)	AQT0682	2715.0	20	VS	
302	RAF1 (Y340E/Y341E), Cascade	S/T	TKL	Signal Chem (R01-13G-10)	AQT0490	2089.4	5	VS	Uses inactive MEK1/ERK2
303	RAF1 (Y340E/Y341E), Direct	S/T	TKL	Signal Chem (R01-13G-10)	AQT0688	2688.0	10	VS	
304	RET	Y	Receptor	Carna (08-159)	AQT0102	1268.2	10	VS	AQT0009
305	RET [G691S]	Y	Receptor	Carna (08-522)	AQT0102	1268.2	10	VS	AQT0009

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.
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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
306	RET [M918T]	Y	Receptor	Carna (08-508)	AQT0102	1268.2	10	VS	AQT0009
307	RET [S891A]	Y	Receptor	Carna (08-523)	AQT0102	1268.2	10	VS	AQT0009
308	RET [Y791F]	Y	Receptor	Carna (08-521)	AQT0102	1268.2	10	VS	AQT0009
309	RET:CCDC6 (CCDC6-RET)	Y	Receptor	SignalChem (R02-19BG)	AQT0102	1268.2	10	VS	AQT0009
310	RIPK2	S/T	TKL	Thermo (PV4213)	AQT0209	3068.5	10	S	AQT0208, 210
311	ROCK1	S/T	CAMK	Carna (01-109)	AQT0231	1370.6	10	VS	
312	ROCK2	S/T	CAMK	Carna (01-110)	AQT0231	1370.6	10	VS	
313	ROS1 (ROS)	Y	Receptor	Carna (08-163)	AQT0101	1384.6	10	VS	
314	ROS1 [G2032R]	Y	Receptor	SignalChem (R14-12BG)	AQT0101	1384.6	10	VS	
315	RPS6KA1 (RSK1)	S/T	AGC	Carna (01-149)	AQT0232	1665.7	10	VS	
316	RPS6KA2 (RSK3)	S/T	AGC	Carna (01-151)	AQT0232	1665.7	10	VS	
317	RPS6KA3 (RSK2)	S/T	AGC	Carna (01-150)	AQT0232	1665.7	10	VS	
318	RPS6KA4(MSK2)	S/T	AGC	Carna (01-148)	AQT0535	1945.2	15	M	
319	RPS6KA5 (MSK1)	S/T	AGC	Carna (01-147)	AQT0535	1945.2	10	VS	
320	RPS6KA6 (RSK4)	S/T	AGC	Carna (01-152)	AQT0232	1665.7	10	VS	
321	RPS6KB1 (p70S6K)	S/T	AGC	Carna (01-158)	AQT0231	1370.6	10	VS	AQT0232
322	RPS6KB2 (p70S6KB)	S/T	AGC	SignalChem (R22-10G)	AQT0231	1370.6	10	VS	
323	SBK1 (SBK)	S/T	Other	SignalChem (S56-10G)	AQT0694	1466.8	15	M	
324	SGK1 (SGK)	S/T	AGC	Thermo (PV3818)	AQT0536	1469.7	10	VS	AQT0076, 233, 535
325	SGK2	S/T	AGC	Carna (01-159)	AQT0536	1469.7	10	VS	AQT0076, 233, 535
326	SGK3	S/T	AGC	Carna (01-160)	AQT0536	1469.7	10	VS	AQT0076, 233, 535
327	SIK1 (SIK)	S/T	CAMK	Carna (02-131)	AQT0508	2040.4	10	VS	AQT0252
328	SIK2 (QIK)	S/T	CAMK	Thermo (PV4792)	AQT0508	2040.4	10	VS	AQT0252, 868
329	SIK3 (QSK)	S/T	CAMK	Dundee/MRC (DU 16623)	AQT0508	2040.4	10	VS	
330	SLK	S/T	STE	Carna (07-129)	AQT0505	2183.6	10	VS	
331	SNRK	S/T	CAMK	SignalChem (S16-10G)	AQT0426	1798.1	15	S	
332	SRC	Y	Soluble	Carna (08-173)	AQT0104	1361.5	10	VS	AQT0101
333	SRMS (SRM)	Y	Soluble	Carna (08-174)	AQT0104	1361.5	10	VS	AQT0026
334	SRPK1	S/T	CMGC	SignalChem (S21-10G)	AQT0360	2741.0	15	VS	
335	SRPK2	S/T	CMGC	Carna (04-161)	AQT0360	2741.0	10	VS	
336	SRPK3 (MSSK1)	S/T	CMGC	SignalChem (S41-10G)	AQT0360	2741.0	15	S	
337	STK3 (MST2)	S/T	STE	Carna (07-117)	AQT0135	2563.7	10	VS	
338	STK4 (MST1)	S/T	STE	SignalChem (S25-10G)	AQT0135	2563.7	10	VS	
339	STK10 (LOK)	S/T	STE	Carna (07-315)	AQT0505	2183.6	10	VS	
340	STK11 (LKB1, AMPKK)	S/T	CAMKL	Carna (02-119)	AQT0728	2563.0	15	M	
341	STK17A (DRAK1)	S/T	CAMK	Carna (02-137)	AQT0173	2438.9	10	S	
342	STK17B (DRAK2)	S/T	CAMK	SignalChem (S34-10G)	AQT0174	2383.5	10	VS	
343	STK24 (MST3)	S/T	STE	Carna (07-118)	AQT0505	2183.6	10	VS	
344	STK25 (YSK1)	S/T	STE	Carna(07-136)	AQT0505	2183.6	10	VS	
345	STK26 (MST4)	S/T	STE	Carna (07-119)	AQT0505	2183.6	15	VS	
346	STK38 (NDR1)	S/T	AGC	Carna (01-125)	AQT0232	1665.7	15	VS	
347	STK38L (NDR2)	S/T	AGC	Carna (01-126)	AQT0232	1665.7	15	VS	
348	SYK	Y	Soluble	Carna (08-176)	AQTY7	1455.5	10	VS	AQT0001, 7, 153
349	TAOK1 (TAO1)	S/T	STE	SignalChem (T24-11G)	AQT0253	1443.5	15	M	
350	TAOK2 (TAO2)	S/T	STE	Carna (07-133)	AQT0253	1443.5	15	M	
351	TAOK3 (TAO3)	S/T	STE	SignalChem (T26-11G)	AQT0253	1443.5	15	M	
352	TBK1	S/T	Other	Carna (05-115)	AQT0215	1474.6	10	VS	
353	TEC	Y	Receptor	Carna (08-182)	AQT0101	1384.6	10	VS	AQT0104
354	TEK (TIE2)	Y	Receptor	Carna (08-185)	AQT0101	1384.6	10	VS	
355	TNIK (ZC2)	S/T	STE	SignalChem (T27-11G)	AQT0181	1446.7	10	VS	AQT0135
356	TNK2 (ACK)	Y	Soluble	SignalChem (A05-11G)	AQT0066	1101.0	10	M	
357	TSSK1B (TSSK1)	S/T	CAMK	Carna (02-364)	AQT0123	3012.5	15	S	
358	TSSK2	S/T	CAMK	SignalChem (S38-10G)	AQT0426	1798.1	15	VS	
359	TSSK3	S/T	CAMK	Carna (02-166)	AQT0426	1798.1	15	VS	
360	TTBK1	S/T	CK1	SignalChem (T17-11G)	AQT0686	2689.0	15	VS	
361	TTBK2	S/T	CK1	SignalChem (T18-11G)	AQT0686	2689.0	15	S	

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.
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	Recombinant Enzyme, HGNC (Common) Name	Type	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
362	TXK	Y	Soluble	Carna (08-183)	AQT0104	1361.5	10	VS	AQT0101
363	TYK2 [JH1]	Y	Soluble	Carna (08-147)	AQT0663	1341.6	15	S	AQT0001
364	TYRO3	Y	Receptor	Carna (08-109)	AQT0104	1361.5	10	VS	
365	ULK1	S/T	Other	Academic Lab	AQT0332	2827.1	10	VS	AQT0679
366	ULK2	S/T	Other	Academic Lab	AQT0332	2827.1	15	S	
367	YES1 (YES)	Y	Soluble	Carna (08-175)	AQT0104	1361.5	10	VS	
368	ZAP70	Y	Soluble	Carna (08-177)	AQT0734	1528.7	10	VS	AQT0001,7

Protein Phosphatases (PPases)

14 assays with 7 Tyr & 7 Ser/Thr Phosphatases

Don't see your target of interest? Please contact us at hello@assayquant.com.

	Recombinant Phosphatase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Family	Enzyme Source (Cat. #)	Best Sensor	Sensor M _r (Da)	[Sensor]	*Assay Strength	Comments
1	PHLPP1 (PHLPP, SCOP)	S/T	Soluble	Academic Lab	AQT0481	2110.2	15	M	
2	PHLPP2 (PHLPL)	S/T	Soluble	Academic Lab	AQT0481	2110.2	15	M	
3	PP1A (PPP1CA/PPP1A)	S/T	Soluble	BPS (41106)	AQT0480	2212.3	15	M	
4	PPM1A (PP2C α , PP2CA)	S/T	Soluble	SignalChem (P02-20G)	AQT0267	1219.3	10	VS	
5	PPM1G (PP2C γ)	S/T	Soluble	SignalChem (P07-20G)	AQT0267	1219.3	10	VS	
6	PPP2CA (PP2CA, PP2A- α)	S/T	Soluble	BPS (30056)	AQT0523	1189.1	10	VS	
7	PPP3CA/B (Calcineurin, PP2B)	S/T	Soluble	R&D Systems (3160-CA20)	AQT0670	2529.8	10	VS	
8	PTPN1 (PTP1B, PTB1B)	Y	Soluble	BPS (30010)	AQT0266	2151.8	10	VS	
9	PTPN11 (SHP-2, PTP2C, PTP1D)	Y	Soluble	BPS (30022)	AQT0737	1558.3	10	VS	
10	PTPN12 (PEST)	Y	Soluble	BPS (30023)	AQT0737	1558.3	10	VS	AQT0667
11	PTPN2 (TC-PTP, PTN2, PTPT)	Y	Soluble	BPS (30013)	AQT0264	2004.1	10	VS	
12	PTPN5 (STEP)	Y	Soluble	Academic Lab	AQT0664	1621.6	15	M	
13	PTPN6 (SHP-1, PTP1C)	Y	Soluble	BPS (100342)	AQT0737	1558.3	10	VS	
14	PTPRC (CD45)	Y	Soluble	BPS (30044)	AQT0630	1280.3	10	VS	AQT0667

*Target Assay Strength Based on Reaction Rates: **VS** = Very Strong **S** = Strong **M** = Medium **W** = Weak See reference table on Page 8.

We strive to provide robust assays that deliver exceptional value with excellent lot-to-lot reproducibility

Summary of PhosphoSens [®] Kinase & Phosphatase Target Assay Strength Based on Reaction Rates					
Categories	Total	Very Strong (VS)	Strong (S)	Med. (M)	Weak (W)
Initial Rate (RFU/pmole/min)		>1000	300-999	100-299	<100
# Assays by Category	382	290	52	40	0
% Assays by Category		76%	14%	10%	0%
% Assays Very Strong or Strong		90%		Being improved	

Transforming Science Through Assay Innovation