

Product List

A Powerful Approach for Understanding Kinase and Phosphatase Function.

Continuous • Information-Rich

Protein Kinase Assays

Sox-based Homogeneous Kinetic and Endpoint/Red Fluorescence-based Assays

Don't see your target of interest? Contact us. Our PhosphoSens® Technology enables rapid assay development.

#	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source Catalog #	Kinetic Sensor	Kinetic Assay Strength	Red/Endpoint Sensor
1	ABL1	Y	Soluble	Carna (08-001)	AQT0031	VS	AQT0031
2	ABL1 [E255K]	Y	Soluble	Carna (08-094)	AQT0032	VS	
3	ABL1 [T315I]	Y	Soluble	Carna (08-093)	AQT0032	VS	
4	ABL2 (ARG)	Y	Soluble	Carna (08-102)	AQT0032	VS	AQT0030
5	AKT1 (PKB)	S/T	AGC	Carna (01-101)	AQT0536	VS	AQT0569
6	AKT2 (PKBβ)	S/T	AGC	Carna (01-102)	AQT0536	VS	AQT0232
7	AKT3 (PKBγ)	S/T	AGC	Carna (01-103)	AQT0536	VS	AQT0569
8	ALK	Y	Receptor	Carna (08-518)	AQT0101	VS	
9	ALK [C1156Y]	Y	Receptor	Carna (08-530)	AQT0101	VS	
10	ALK [F1174L]	Y	Receptor	Carna (08-519)	AQT0101	VS	
11	ALK [G1269A]	Y	Receptor	Carna (08-537)	AQT0101	VS	
12	ALK [G1202R]	Y	Receptor	Carna (08-544)	AQT0101	VS	
13	ALK [L1196M/G1202R]	Y	Receptor	SignalChem (A19-12NG)	AQT0101	VS	
14	ALK [L1196M]	Y	Receptor	Carna (08-529)	AQT0101	VS	
15	ALK [R1275Q]	Y	Receptor	Carna (08-520)	AQT0101	VS	
16	ALK [T1151-L1152 INS T]	Y	Receptor	Carna (08-539)	AQT0101	VS	
17	ALK:NPM1 (NPM1-ALK)	Y	Receptor	Carna (08-517)	AQT0101	S	
18	AURKA (AURA)	S/T	Other	Carna (05-101)	AQT0186	VS	AQT0455
19	AURKB (AURB)	S/T	Other	Carna (05-102)	AQT0186	VS	AQT0186
20	AURKC (AURC)	S/T	Other	Carna (05-103)	AQT0186	VS	AQT0186
21	AXL	Y	Receptor	Carna (08-107)	AQT0101	VS	
22	BLK	Y	Soluble	Carna (08-164)	AQT0032	VS	
23	BMX	Y	Soluble	Carna (08-179)	AQT0104	VS	
24	BRSK1	S/T	CAMK	Carna (02-115)	AQT0394	S	
25	BRSK2	S/T	CAMK	Carna (02-116)	AQT0394	S	
26	BTK	Y	Soluble	Carna (08-180)	AQT0101	VS	AQT0663
27	BTK [C481S]	Y	Soluble	Carna (08-547)	AQT0101	VS	
28	BUB1	S/T	Other	Carna (05-187)	AQT0848	M	
29	CAMK1A (CAMK1α)	S/T	CAMK	Carna (02-104)	AQT0426	VS ¹	
30	CAMK1D (CAMK1δ)	S/T	CAMK	SignalChem (C09-10G)	AQT0420	VS ¹	
31	CAMK1G (CAMK1γ)	S/T	CAMK	SignalChem (C10-11G)	AQT0420	VS ¹	
32	CAMK2A (CAMK2α)	S/T	CAMK	Carna (02-109)	AQT0425	VS ¹	

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33	CAMK2B (CAMK2β)	S/T	CAMK	Carna (02-110)	AQT0425	VS	
34	CAMK2D (CAMK2δ)	S/T	CAMK	Carna (02-111)	AQT0425	VS ¹	
35	CAMK2G (CAMK2γ)	S/T	CAMK	Carna (02-112)	AQT0425	VS ¹	
36	CAMK4	S/T	CAMK	Carna (02-108)	AQT0426	VS ¹	AQT0420
37	CAMKK1	S/T	Other	Carna (05-157)	AQT0699	S ¹	
38	CDC42BPB (MRCKB)	S/T	AGC	Carna (01-108)	AQT0713	M	
39	CDC42BPG (DMPK2)	S/T	AGC	SignalChem (D17-11G)	AQT0324	S	AQT0837
40	CDK1/CycB1(CDC2)	S/T	CMGC	Carna(04-102)	AQT0297	VS	
41	CDK1/CycE1	S/T	CMGC	Proqinase (0134-0055-1)	AQT0297	VS	AQT0296
42	CDK2/CycA2	S/T	CMGC	Carna (04-103)	AQT0297	VS	
43	CDK2/CycE1	S/T	CMGC	Carna (04-165)	AQT0297	VS	AQT0255
44	CDK3/CycE1	S/T	CMGC	Carna (04-104)	AQT0297	VS	
45	CDK4 /CycD3	S/T	CMGC	Carna (04-105)	AQT0258	S	AQT0730
46	CDK5/p25	S/T	CMGC	Carna (04-106)	AQT0255	VS	AQT0730
47	CDK5/p35	S/T	CMGC	SignalChem (C33-10BG)	AQT0255	VS	
48	CDK6/CycD1	S/T	CMGC	Carna (04-114)	AQT0258	VS	
49	CDK6/CycD3	S/T	CMGC	Carna (04-107)	AQT0258	S	AQT0730
50	CDK7/CycH/MAT1	S/T	CMGC	Carna (04-108)	AQT0733	S	AQT0733
51	CDK9 (TAK) w/CycK	S/T	CMGC	Carna (04-111)	AQT0449	M	
52	CDK9 (TAK) w/CycT1	S/T	CMGC	Carna (04-110)	AQT0449	VS	AQT0449
53	CDK14 (PFTAIRE1)/CycY	S/T	CMGC	SignalChem (P15-10G)	AQT0730	M	AQT0730
54	CDK16/CycY	S/T	CMGC	Carna (04-116)	AQT0258	S	AQT0730
55	CDK17 (PCTAIRE2)/CycY	S/T	CMGC	SignalChem (P10-10G)	AQT0730	S	AQT0730
56	CDK18/CycY (PCTAIRE3)	S/T	CMGC	Thermo (A30492)	AQT0255	S	AQT0730
57	CDPK1 (toxoplasma gondii)	S/T	CAMK	Academic Lab	AQT0124	VS	
58	CDPK3 (toxoplasma gondii)	S/T	CAMK	Academic Lab	AQT0124	VS	
59	CHEK1 (CHK1)	S/T	CAMK	Carna (02-117)	AQT0694	VS	AQT0694
60	CHEK2 (CHK2)	S/T	CAMK	Carna (02-162)	AQT0694	VS	AQT0694
61	CHUK (IKKA, IKKα)	S/T	Other	Carna (05-112)	AQT0603	M	
62	CIT (CRIK)	S/T	AGC	Carna (01-104)	AQT0694	M	
63	CLK1	S/T	CMGC	SignalChem (C57-11G)	AQT0360	S	
64	CLK2	S/T	CMGC	Carna (04-127)	AQT0360	VS	
65	CLK3	S/T	CMGC	Carna (04-128)	AQT0360	VS	
66	CSF1R (FMS)	Y	Receptor	Carna (08-155)	AQT0104	VS	
67	CSK	Y	Soluble	Carna (08-111)	AQT0101	M	
68	CSNK1A1 (CK1A1, CK1α)	S/T	CK1	Carna (03-101)	AQT0709	VS	
69	CSNK1A1L (CK1A1L, CK1α2)	S/T	CK1	SignalChem (C75-10G)	AQT0709	VS	
70	CSNK1D (CK1D, CK1δ)	S/T	CK1	Carna (03-103)	AQT0709	VS	
71	CSNK1E (CK1E, CK1ε)	S/T	CK1	Carna (03-104)	AQT0709	VS	
72	CSNK1G1 (CK1G1, CK1γ1)	S/T	CK1	Carna (03-105)	AQT0709	VS	
73	CSNK1G2 (CK1G2, CK1γ2)	S/T	CK1	Carna (03-106)	AQT0709	VS	
74	CSNK1G3 (CK1G3, CK1γ3)	S/T	CK1	Carna (03-107)	AQT0709	VS	
75	CSNK2A1 (CK2A1, CK2α1)	S/T	Other	Thermo (PV3248)	AQT0696	VS	
76	CSNK2A2 (CK2A2, CK2α2)	S/T	Other	Thermo (PV3624)	AQT0696	S	
77	DAPK1	S/T	CAMK	SignalChem (D01-11G)	AQT0173	VS ¹	
78	DAPK2 (DRP-1)	S/T	CAMK	SignalChem (D02-10G)	AQT0236	VS ¹	
79	DAPK3 (ZIPK)	S/T	CAMK	Carna (02-136)	AQT0237	VS ¹	
80	DCLK1 (DCAMKL1)	S/T	CAMK	Carna (02-139)	AQT0426	S ¹	
81	DCLK2 (DCAMKL2)	S/T	CAMK	Carna (02-140)	AQT0426	VS ¹	
82	DDR1 (SRC treated)	Y	Receptor	Carna (08-132)	AQT0235	M	
83	DDR2	Y	Receptor	Carna (08-114)	AQT0235	VS ²	
84	DYRK1A	S/T	CMGC	Carna (04-130)	AQT0260	VS	
85	DYRK1B	S/T	CMGC	Carna (04-131)	AQT0260	VS	

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86	DYRK2	S/T	CMGC	Carna (04-132)	AQT0260	VS	
87	DYRK3	S/T	CMGC	Carna (04-133)	AQT0260	VS	
88	DYRK4	S/T	CMGC	Carna (04-434)	AQT0260	VS	
89	EEF2K (eEF2K)	S/T	Atypical	Carna (10-113)	AQT0349	VS ¹	
90	EGFR (ERBB1)	Y	Receptor	BPS (40187)	AQT0734	VS	AQT0653
91	EGFR (D770_N771insNPG)	Y	Receptor	Carna (08-553)	AQT0734	VS	
92	EGFR [C797S/L858R]	Y	Receptor	SignalChem (E10-122ZG)	AQT0734	VS	AQT0653
93	EGFR [d746-750/C797S/T790M]	Y	Receptor	SignalChem (E10-122UG)	AQT0734	VS	
94	EGFR [d746-750/C797S]	Y	Receptor	SignalChem (E10-122TG)	AQT0734	VS	
95	EGFR [d746-750/T790M]	Y	Receptor	SignalChem (E10-122KG)	AQT0734	VS	
96	EGFR [d746-750]	Y	Receptor	Carna (08-527)	AQT0734	VS	
97	EGFR [L858R]	Y	Receptor	SignalChem (E10-122BG)	AQT0734	VS	
98	EGFR [L861Q]	Y	Receptor	Carna (08-513)	AQT0734	VS	
99	EGFR [T790M/C797S/L858R]	Y	Receptor	SignalChem (E10-122VG)	AQT0734	VS	AQT0653
100	EGFR [T790M/L858R]	Y	Receptor	Carna (08-510)	AQT0734	VS	AQT0653
101	EGFR [T790M]	Y	Receptor	Carna (08-194)	AQT0734	VS	
102	EIF2AK1 (HRI)	S/T	Other	Carna (05-154)	AQT0748	M	AQT0621
103	EIF2AK2 (PKR), Full length	S/T	Other	Academic Lab	AQT0355	VS ³	
104	EIF2AK3 (PERK/PEK)	S/T	Other	Carna (05-155)	AQT0356	VS	
105	EIF2AK4 (GCN2)	S/T	Other	Carna (05-153)	AQT0349	VS ⁴	AQT0911
106	EPHA1	Y	Receptor	Carna (08-119)	AQT0101	VS	
107	EPHA2	Y	Receptor	Carna (08-121)	AQT0104	VS	
108	EPHA3	Y	Receptor	Carna (08-122)	AQT0104	VS	
109	EPHA4	Y	Receptor	Carna (08-123)	AQT0104	VS	
110	EPHA5	Y	Receptor	Carna (08-124)	AQT0104	VS	
111	EPHA6	Y	Receptor	Carna (08-125)	AQT0104	VS	
112	EPHA7	Y	Receptor	Carna (08-126)	AQT0102	VS	
113	EPHA8	Y	Receptor	Carna (08-127)	AQT0104	VS	
114	EPHB1	Y	Receptor	Carna (08-128)	AQT0101	VS	
115	EPHB2	Y	Receptor	Carna (08-129)	AQT0101	VS	
116	EPHB3	Y	Receptor	Carna (08-130)	AQT0101	VS	
117	EPHB4	Y	Receptor	Carna (08-131)	AQT0101	VS	
118	ERBB2 (HER2)	Y	Receptor	BPS (40230)	AQT0794	VS	
119	ERBB2 (HER2) [A775/G776insYVMA]	Y	Receptor	SignalChem (E27-13BG)	AQT0794	VS	
120	ERBB4 (HER4)	Y	Receptor	Carna (08-118)	AQT0794	VS	
121	ERN1 (IRE1)	S/T	Other	Thermo (A30971)	AQT0715	S	AQT0715
122	ERN2 (IRE2)	S/T	Other	SignalChem (E32-11G)	AQT0715	M	
123	FAM20C	S/T	Other	SignalChem (F18-11G)	AQT0698	S	
124	FER	Y	Soluble	Carna (08-139)	AQT0104	VS	
125	FES	Y	Soluble	Carna (08-140)	AQT0104	VS	
126	FGFR1	Y	Receptor	Carna (08-133)	AQT0101	VS	AQT0515
127	FGFR2	Y	Receptor	Carna (08-134)	AQT0101	VS	AQT0515
128	FGFR3	Y	Receptor	Carna (08-135)	AQT0101	VS	AQT0515
129	FGFR3 [G697C]	Y	Receptor	Proqinase (1071-0000-1)	AQT0101	S	
130	FGFR3 [K650E]	Y	Receptor	Carna (08-501)	AQT0101	VS	
131	FGFR3 [K650M]	Y	Receptor	Carna (08-199)	AQT0101	VS	
132	FGFR3 [V555L]	Y	Receptor	Carna (08-548)	AQT0101	VS	
133	FGFR3 [V555M]	Y	Receptor	Carna (08-543)	AQT0101	VS	
134	FGFR4	Y	Receptor	Carna (08-136)	AQT0101	VS	AQT0026
135	FGR	Y	Soluble	Carna (08-166)	AQT0032	VS	
136	FLT1	Y	Receptor	Carna (08-189)	AQT0001	VS	
137	FLT3	Y	Receptor	Carna (08-154)	AQT0101	VS	

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138	FLT4	Y	Receptor	Carna (08-190)	AQT0001	VS	
139	FRK	Y	Soluble	Carna (08-167)	AQT0101	VS	
140	FYNa	Y	Soluble	Carna (08-168)	AQT0104	VS	
141	FYNb	Y	Soluble	Carna (08-531)	AQT0104	VS	
142	GRK1 (RHOK)	S/T	AGC	SignalChem (R03-10G)	AQT0603	S	
143	GRK2 (ADRBK1, BARK1)	S/T	AGC	Thermo (PV3361)	AQT0641	VS	AQT0641
144	GRK3 (ADRBK2, BARK2)	S/T	AGC	Carna (01-112)	AQT0641	S	
145	GRK4 (GPRK4)	S/T	AGC	Carna (01-313)	AQT0641	M	
146	GRK5 (GPRK5)	S/T	AGC	SignalChem (G03-10G)	AQT0641	M	
147	GRK7 (GPRK7)	S/T	AGC	Carna (01-316)	AQT0641	S	
148	GSK3A (GSK3 α)	S/T	CMGC	Carna (04-140)	AQT0157	VS	
149	GSK3B (GSK3 β)	S/T	CMGC	Carna (04-141)	AQT0157	VS	AQT0490
150	HASPIN	S/T	Other	Carna (05-111)	AQT0798	VS	
151	HCK	Y	Soluble	Carna (08-169)	AQT0101	VS	
152	HIPK1	S/T	CMGC	Carna (04-135)	AQT0849	M	
153	HIPK2	S/T	CMGC	Carna (04-136)	AQT0134	VS	
154	HIPK3	S/T	CMGC	Carna (04-137)	AQT0849	M	
155	HIPK4	S/T	CMGC	Carna (04-138)	AQT0849	M	
156	ICK	S/T	CMGC	Carna (04-156)	AQT0257	S	
157	IGF1R	Y	Receptor	Carna (08-141)	AQT0101	VS	
158	IKKB (IKK β)	S/T	Other	Carna (05-084)	AQT0215	VS	
159	IKKE (IKK ϵ)	S/T	Other	Thermo (PV4875)	AQT0215	VS	
160	INSR (IR)	Y	Receptor	Carna (08-142)	AQT0101	VS	
161	INSRR (IRR)	Y	Receptor	Carna (08-143)	AQT0104	VS	
162	IRAK1	S/T	TKL	Carna (09-101)	AQT0326	VS	
163	IRAK4	S/T	TKL	Carna (09-145)	AQT0326	VS	
164	ITK	Y	Soluble	Thermo (PV3875)	AQT0101	VS	
165	JAK1 [JH1]	Y	Soluble	Thermo (PV4774)	AQT0663	S	AQT0658
166	JAK1 [JH1-JH2]	Y	Soluble	SignalChem (J01-11G)	AQT0663	S	
167	JAK2 [JH1]	Y	Soluble	Carna (08-045)	AQT0661	VS	
168	JAK2 [JH1-JH2]	Y	Soluble	Carna (08-514)	AQT0661	VS	
169	JAK3 [JH1]	Y	Soluble	Carna (08-046)	AQT0658	VS	
170	KDR (VEGFR2)	Y	Receptor	Carna (08-191)	AQT0101	VS	
171	KIT	Y	Receptor	Carna (08-156)	AQT0102	VS	
172	KSR1	S/T	TKL	SignalChem (J01-11G)	AQT0694	M	
173	KSR2	S/T	TKL	SignalChem (J01-11G)	AQT0694	S	
174	LATS1	S/T	AGC	Carna (01-123)	AQT0476	VS	
175	LATS2	S/T	AGC	Carna (01-124)	AQT0476	VS	
176	LCK	Y	Soluble	Carna (08-170)	AQT0104	VS	
177	LRRK2	S/T	TKL	Thermo (PV48783)	AQT0615	VS	AQT0615
178	LRRK2 [G2019S]	S/T	TKL	Thermo (PV4881)	AQT0615	VS	AQT0615
179	LTK	Y	Soluble	Carna (08-106)	AQT0104	VS	
180	LYNa	Y	Soluble	Carna (08-171)	AQT0104	VS	
181	LYNb	Y	Soluble	Carna (08-172)	AQT0104	VS	
182	MAK	S/T	CMGC	SignalChem (M01-10G)	AQT0257	S	
183	MAP2K1 (MEK1), Cascade	S/T/Y	STE	Carna (07-141)	AQT0490	VS ⁵	
184	MAP2K1 (MEK1), Direct	S/T/Y	STE	Carna (07-141)	AQT0855	VS	
185	MAP2K2 (MEK2), Cascade	S/T/Y	STE	Carna (07-142)	AQT0490	VS ⁵	
186	MAP2K2 (MEK2), Direct	S/T/Y	STE	Carna (07-142)	AQT0855	VS	
187	MAP3K1 (MEK1)	S/T	STE	Carna (07-103)	AQT0739	M	
188	MAP3K2 (MEK2)	S/T	STE	SignalChem (M10-10G)	AQT0739	M	
189	MAP3K3 (MEK3)	S/T	STE	Carna (07-105)	AQT0743	M	
190	MAP3K5 (ASK1)	S/T	STE	SignalChem (M13-10G)	AQT0557	VS ⁶	AQT0557

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191	MAP3K8 (Tpl2, COT)	S/T	TKL	Carna (07-301)	AQT0742	VS	AQT0716
192	MAP3K9 (MLK1)	S/T	TKL	Carna (09-115)	AQT0645	VS	
193	MAP3K11 (MLK3)	S/T	TKL	Carna (09-017)	AQT0646	M	
194	MAP3K19 (YSK4)	S/T	TKL	SignalChem (Y06-11G)	AQT0742	VS	
195	MAP3K20 (MLK7, ZAK)	S/T	TKL	Carna (09-120)	AQT0742	M	
196	MAP4K1 (HPK1)	S/T	STE	Thermo (PV6355)	AQT0505	VS	AQT0080
197	MAP4K2 (GCK)	S/T	STE	SignalChem (M24-10G)	AQT0505	VS	
198	MAP4K3 (GLK, KHS2)	S/T	STE	SignalChem (M25-11G)	AQT0505	S	
199	MAP4K4 (HGK, ZC1)	S/T	STE	Carna (07-137)	AQT0135	VS	AQT0135
200	MAP4K5 (KHS1)	S/T	STE	SignalChem (M27-10G)	AQT0178	VS	
201	MAPK1 (ERK2)	S/T	CMGC	Carna (04-143)	AQT0490	VS	AQT0649
202	MAPK3 (ERK1)	S/T	CMGC	Carna (04-142)	AQT0490	VS	AQT0650
203	MAPK7 (ERK5)	S/T	CMGC	Carna (04-146)	AQT0373	VS	
204	MAPK8 (JNK1)	S/T	CMGC	Carna (04-163)	AQT0365	VS	
205	MAPK9 (JNK2)	S/T	CMGC	Carna (04-164)	AQT0365	VS	AQT0651
206	MAPK10 (JNK3)	S/T	CMGC	Carna (04-150)	AQT0365	VS	
207	MAPK11 (p38β)	S/T	CMGC	Carna (04-153)	AQT0490	VS	AQT0490
208	MAPK12 (p38γ)	S/T	CMGC	Carna (04-155)	AQT0490	VS	AQT0649
209	MAPK13 (p38δ)	S/T	CMGC	Carna (04-154)	AQT0490	VS	AQT0649
210	MAPK14 (p38α)	S/T	CMGC	Carna (04-152)	AQT0490	VS	AQT0649
211	MAPKAPK2 (MK2)	S/T	CAMK	Carna (02-142)	AQT0426	VS	
212	MAPKAPK3 (MK3)	S/T	CAMK	Carna (02-143)	AQT0425	VS	
213	MAPKAPK5 (MK5)	S/T	CAMK	Carna (02-144)	AQT0490	VS	
214	MARK1	S/T	CAMK	Carna (02-120)	AQT0393	VS	
215	MARK2	S/T	CAMK	Carna (02-121)	AQT0393	VS	
216	MARK3	S/T	CAMK	Carna (02-122)	AQT0393	VS	
217	MARK4	S/T	CAMK	Carna (02-123)	AQT0393	VS	
218	MASTL	S/T	AGC	SignalChem (M72-10G)	AQT0693	S	AQT0703
219	MELK	S/T	CAMK	Carna (02-124)	AQT0426	VS ¹	
220	MERTK (MER)	Y	Receptor	Carna (08-108)	AQT0101	VS	
221	MET (c-MET, HGFR)	Y	Receptor	Carna (08-151)	AQT0658	VS	AQT0658
222	MINK1 (ZC3)	S/T	STE	SignalChem (M53-11G)	AQT0183	VS	
223	MKNK1 (MKN1)	S/T	CAMK	SignalChem (M54-10G)	AQT0426	VS	
224	MKNK2 (MKN2)	S/T	CAMK	SignalChem (M55-10G)	AQT0426	VS	
225	MST1R (RON)	Y	Receptor	Carna (08-152)	AQT0734	VS	
226	MUSK	Y	Receptor	Carna (08-153)	AQT0101	S	
227	MYLK (MLCK)	S/T	CAMK	SignalChem (M62-11G)	AQT0151	S ¹	
228	MYLK2	S/T	CAMK	SignalChem (M63-10H)	AQT0517	VS ¹	
229	MYO3A	S/T	STE	SignalChem (M65-11G)	AQT0505	S	
230	MYO3B	S/T	STE	SignalChem (M66-11G)	AQT0135	M	
231	NEK1	S/T	Other	Carna (05-123)	AQT0418	VS	
232	NEK2	S/T	Other	Carna (05-226)	AQT0415	VS	
233	NEK3	S/T	Other	Carna (05-127)	AQT0415	M	
234	NEK4	S/T	Other	Carna (05-128)	AQT0418	S	
235	NEK5	S/T	Other	SignalChem (N07-11G)	AQT0418	VS	
236	NEK7	S/T	Other	Carna (05-131)	AQT0415	M	
237	NEK9	S/T	Other	Carna (05-133)	AQT0415	VS	
238	NEK10	S/T	Other	SignalChem (N12-11G)	AQT0415	M	
239	NIM1 (NIM1K)	S/T	CAMK	SignalChem (N14-10G)	AQT0694	S	
240	NLK (LAK1)	S/T	CMGC	Carna (04-151)	AQT0374	S	
241	NTRK1 (TRKA)	Y	Receptor	BPS (BS40280)	AQT0104	VS	
242	NTRK2 (TRKB)	Y	Receptor	BPS (BS40281)	AQT0104	VS	
243	NTRK3 (TRKC)	Y	Receptor	BPS (BS40282)	AQT0104	VS	

#	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source Catalog #	Kinetic Sensor	Kinetic Assay Strength	Red/Endpoint Sensor
244	NUAK1 (ARK5)	S/T	CAMK	Carna (02-126)	AQT0393	VS	
245	NUAK2 (SNARK)	S/T	CAMK	Carna (02-127)	AQT0393	VS	
246	PAK1	S/T	STE	Carna (07-123)	AQT0838	S	AQT0838
247	PAK2	S/T	STE	Carna (07-124)	AQT0838	VS	AQT0839
248	PAK3	S/T	STE	Carna (07-125)	AQT0838	S	AQT0845
249	PAK4	S/T	STE	SignalChem (P05-10BG)	AQT0840	S	AQT0840
250	PAK5 (PAK7)	S/T	STE	SignalChem (P07-10G)	AQT0840	M	AQT0840
251	PAK6	S/T	STE	Carna (07-128)	AQT0840	M	AQT0840
252	PBK (TOPK)	S/T	TKL	SignalChem (A05-11G)	AQT0766	S	
253	PDGFRA (PDGFR α)	Y	Receptor	Carna (08-157)	AQT0734	VS	
254	PDGFRB (PDGFR β)	Y	Receptor	Carna (08-158)	AQT0101	VS	
255	PDK1 (PDHK1)	S/T	Atypical	SignalChem (P57-10G)	AQT0872	M ⁷	
256	PDK2 (PDHK2)	S/T	Atypical	SignalChem (P58-10G)	AQT0896	M ⁷	
257	PDK3 (PDHK3)	S/T	Atypical	SignalChem (P59-10G)	AQT0872	M ⁷	
258	PDK4 (PDHK4)	S/T	Atypical	SignalChem (P60-10G)	AQT0872	S ⁷	
259	PDPK1 (PDK1)	S/T	AGC	SignalChem (P14-10H)	AQT0126	VS	
260	PHKG1	S/T	CAMK	Carna (02-152)	AQT0426	S ¹	
261	PHKG2	S/T	CAMK	Carna (02-153)	AQT0426	S ¹	
262	PIM1	S/T	CAMK	Carna (02-054)	AQT0474	VS	
263	PIM2	S/T	CAMK	Carna (02-155)	AQT0230	VS	
264	PIM3	S/T	CAMK	Carna (02-156)	AQT0473	VS	
265	PINK1 (PINK)	S/T	Other	BOSTON BIO(AP-182)	AQT0686	S	
266	PKN1	S/T	AGC	Carna (01-144)	AQT0462	VS	AQT0509
267	PKN2	S/T	AGC	Carna (01-145)	AQT0426	VS	AQT0462
268	PKN3	S/T	AGC	Carna (01-146)	AQT0509	S	AQT0509
269	PLK1	S/T	Other	BPS (40033)	AQT0691	VS	
270	PLK3	S/T	Other	SignalChem (P43-13G)	AQT0691	VS	
271	PLK4	S/T	Other	Thermo (PV6394)	AQT0686	VS	
272	PNCK (CAMK1 β)	S/T	CAMK	Carna (02-105)	AQT0420	VS ¹	
273	PRKAA1-B1-G1 (AMPK α 1 β 1 γ 1)	S/T	CAMK	Carna (02-113)	AQT0426	VS ⁸	
274	PRKAA1-B2-G1 (AMPK α 1 β 2 γ 1)	S/T	CAMK	Carna (02-147)	AQT0426	VS ⁸	
275	PRKAA2-B1-G1 (AMPK α 2 β 1 γ 1)	S/T	CAMK	Carna (02-114)	AQT0426	VS ⁸	
276	PRKAA2-B2-G1 (AMPK α 2 β 2 γ 1)	S/T	CAMK	Carna (02-148)	AQT0426	VS ⁸	
277	PRKACA (PKC α)	S/T	AGC	Carna (01-127)	AQT0458	VS	
278	PRKACB (PKC β)	S/T	AGC	Carna (01-128)	AQT0458	VS	
279	PRKACG (PKC γ , PKC δ)	S/T	AGC	SignalChem (P53-10G)	AQT0231	VS	
280	PRKCA (PKC α [alpha])	S/T	AGC	Carna (01-133)	AQT0316	VS	
281	PRKCB1 (PKC β 1 [beta1])	S/T	AGC	Carna (01-134)	AQT0316	VS	
282	PRKCB2 (PKC β 2 [beta2])	S/T	AGC	Carna (01-165)	AQT0462	VS	
283	PRKCD (PKC δ [delta])	S/T	AGC	Carna (01-135)	AQT0462	VS	
284	PRKCE (PKC ϵ [epsilon])	S/T	AGC	Carna (01-136)	AQT0465	VS	
285	PRKCG (PKC ζ [gamma])	S/T	AGC	Carna (01-137)	AQT0316	VS	
286	PRKCH (PKC η [eta])	S/T	AGC	Carna (01-138)	AQT0462	VS	
287	PRKCI (PKC ι [iota])	S/T	AGC	Carna (01-139)	AQT0462	VS	
288	PRKCQ (PKC θ [theta])	S/T	AGC	Carna (01-140)	AQT0465	VS	
289	PRKCZ (PKC ζ [zeta])	S/T	AGC	Carna (01-141)	AQT0462	VS	
290	PRKD1 (PKD1)	S/T	CAMK	Carna (02-157)	AQT0803	VS	AQT0694
291	PRKD2 (PKD2)	S/T	CAMK	Carna (02-158)	AQT0803	VS	AQT0694
292	PRKD3 (PKD3)	S/T	CAMK	Carna (02-159)	AQT0803	VS	AQT0694
293	PRKDC (DNA-PK)	S/T	Atypical	Thermo (PV5866)	AQT0439	VS	
294	PRKG1 (PKG1, PGK)	S/T	AGC	Carna (01-142)	AQT0452	VS ⁹	AQT0324
295	PRKG2 (PKG2, PGK2, CGK2)	S/T	AGC	Carna (01-143)	AQT0452	VS ⁹	
296	PRKX	S/T	AGC	Carna (01-130)	AQT0186	S	

#	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source Catalog #	Kinetic Sensor	Kinetic Assay Strength	Red/Endpoint Sensor
297	PTK2 (FAK)	Y	Soluble	Carna (08-137)	AQT0061	S ²	
298	PTK2B (PYK2)	Y	Soluble	Carna (08-138)	AQT0101	VS	
299	PTK6 (BRK)	Y	Soluble	Carna (08-165)	AQT0101	VS	
300	Raf, b- (V599E), Cascade	S/T	TKL	Thermo (PR7304A)	AQT0490	VS ¹⁰	
301	Raf, b- (V599E), Direct	S/T	TKL	Thermo (PR7304A)	AQT0682	VS	AQT0682
302	RAF1 (Y340E/Y341E), Cascade	S/T	TKL	Signal Chem (R01-13G-10)	AQT0490	VS ¹⁰	
303	RAF1 (Y340E/Y341E), Direct	S/T	TKL	Signal Chem (R01-13G-10)	AQT0688	VS	AQT0688
304	RET	Y	Receptor	Carna (08-159)	AQT0102	VS	
305	RET [G691S]	Y	Receptor	Carna (08-522)	AQT0102	VS	
306	RET [M918T]	Y	Receptor	Carna (08-508)	AQT0102	VS	
307	RET [S891A]	Y	Receptor	Carna (08-523)	AQT0102	VS	
308	RET [Y791F]	Y	Receptor	Carna (08-521)	AQT0102	VS	
309	RET:CCDC6 (CCDC6-RET)	Y	Receptor	SignalChem (R02-19BG)	AQT0102	VS	
310	RIPK2	S/T	TKL	Thermo (PV4213)	AQT0209	S	
311	ROCK1	S/T	CAMK	Carna (01-109)	AQT0231	VS	AQT0713
312	ROCK2	S/T	CAMK	Carna (01-110)	AQT0231	VS	AQT0713
313	ROS1 (ROS)	Y	Receptor	Carna (08-163)	AQT0101	VS	
314	ROS1 [G2032R]	Y	Receptor	SignalChem (R14-12BG)	AQT0101	VS	
315	RPS6KA1 (RSK1)	S/T	AGC	Carna (01-149)	AQT0232	VS	AQT0535
316	RPS6KA2 (RSK3)	S/T	AGC	Carna (01-151)	AQT0232	VS	AQT0535
317	RPS6KA3 (RSK2)	S/T	AGC	Carna (01-150)	AQT0232	VS	AQT0233
318	RPS6KA4(MSK2)	S/T	AGC	Carna (01-148)	AQT0535	M	
319	RPS6KA5 (MSK1)	S/T	AGC	Carna (01-147)	AQT0535	VS	
320	RPS6KA6 (RSK4)	S/T	AGC	Carna (01-152)	AQT0232	VS	
321	RPS6KB1 (p70S6K)	S/T	AGC	Carna (01-158)	AQT0231	VS	AQT0535
322	RPS6KB2 (p70S6KB)	S/T	AGC	SignalChem (R22-10G)	AQT0231	VS	
323	SBK1 (SBK)	S/T	Other	SignalChem (S56-10G)	AQT0694	M	
324	SGK1 (SGK)	S/T	AGC	Thermo (PV3818)	AQT0536	VS	AQT0566
325	SGK2	S/T	AGC	Carna (01-159)	AQT0536	VS	AQT0566
326	SGK3	S/T	AGC	Carna (01-160)	AQT0536	VS	AQT0566
327	SIK1 (SIK)	S/T	CAMK	Carna (02-131)	AQT0508	VS	
328	SIK2 (QIK)	S/T	CAMK	Carna (02-129)	AQT0508	VS	
329	SIK3 (QSK)	S/T	CAMK	Dundee/MRC (DU 16623)	AQT0508	VS	AQT0508
330	SLK	S/T	STE	Carna (07-129)	AQT0505	VS	
331	SNRK	S/T	CAMK	SignalChem (S16-10G)	AQT0426	S	
332	SRC	Y	Soluble	Carna (08-173)	AQT0104	VS	
333	SRMS (SRM)	Y	Soluble	Carna (08-174)	AQT0104	VS	
334	SRPK1	S/T	CMGC	SignalChem (S21-10G)	AQT0360	VS	
335	SRPK2	S/T	CMGC	Carna (04-161)	AQT0360	VS	
336	SRPK3 (MSSK1)	S/T	CMGC	SignalChem (S41-10G)	AQT0360	S	
337	STK3 (MST2)	S/T	STE	Carna (07-117)	AQT0135	VS	
338	STK4 (MST1)	S/T	STE	SignalChem (S25-10G)	AQT0135	VS	
339	STK10 (LOK)	S/T	STE	Carna (07-315)	AQT0505	VS	
340	STK11 (LKB1, AMPKK)	S/T	CAMKL	Carna (02-119)	AQT0728	M	
341	STK17A (DRAK1)	S/T	CAMK	Carna (02-137)	AQT0173	S	
342	STK17B (DRAK2)	S/T	CAMK	SignalChem (S34-10G)	AQT0174	VS	
343	STK24 (MST3)	S/T	STE	Carna (07-118)	AQT0505	VS	
344	STK25 (YSK1)	S/T	STE	Carna(07-136)	AQT0505	VS	
345	STK26 (MST4)	S/T	STE	Carna (07-119)	AQT0505	VS	
346	STK38 (NDR1)	S/T	AGC	Carna (01-125)	AQT0232	VS	
347	STK38L (NDR2)	S/T	AGC	Carna (01-126)	AQT0232	VS	
348	SYK	Y	Soluble	Carna (08-176)	AQTY7	VS	
349	TAOK1 (TAO1)	S/T	STE	SignalChem (T24-11G)	AQT0253	M	

#	Recombinant Kinase, HGNC (Common) Name	Ser (S), Thr (T) or Tyr (Y)	Class or Family	Enzyme Source Catalog #	Kinetic Sensor	Kinetic Assay Strength	Red/Endpoint Sensor
350	TAOK2 (TAO2)	S/T	STE	Carna (07-133)	AQT0253	M	
351	TAOK3 (TAO3)	S/T	STE	SignalChem (T26-11G)	AQT0253	M	
352	TBK1	S/T	Other	Carna (05-115)	AQT0215	VS	
353	TEC	Y	Receptor	Carna (08-182)	AQT0101	VS	
354	TEK (TIE2)	Y	Receptor	Carna (08-185)	AQT0101	VS	
355	TNIK (ZC2)	S/T	STE	SignalChem (T27-11G)	AQT0181	VS	
356	TNK2 (ACK)	Y	Soluble	SignalChem (A05-11G)	AQT0066	M	
357	TRPM7 (CHAK1)	S/T	Atypical	Carna (10-111)	AQT0349	VS	
358	TSSK1B (TSSK1)	S/T	CAMK	Carna (02-364)	AQT0394	S	
359	TSSK2	S/T	CAMK	SignalChem (S38-10G)	AQT0426	VS	
360	TSSK3	S/T	CAMK	Carna (02-166)	AQT0426	VS	
361	TTK	S/T	Other	Carna (05-169)	AQT0897	S	
362	TTBK1	S/T	CK1	SignalChem (T17-11G)	AQT0686	VS	
363	TTBK2	S/T	CK1	SignalChem (T18-11G)	AQT0686	S	
364	TXK	Y	Soluble	Carna (08-183)	AQT0104	VS	
365	TYK2 [JH1]	Y	Soluble	Carna (08-147)	AQT0663	S	
366	TYRO3	Y	Receptor	Carna (08-109)	AQT0104	VS	
367	ULK1	S/T	Other	Academic Lab	AQT0332	VS	
368	ULK2	S/T	Other	Academic Lab	AQT0332	S	
369	YES1 (YES)	Y	Soluble	Carna (08-175)	AQT0104	VS	AQT0515
370	ZAP70	Y	Soluble	Carna (08-177)	AQT0734	VS	

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Protein Phosphatases (PPases)

Don't see your target of interest? Contact us. Our PhosphoSens® Technology enables rapid assay development.

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

Table 1.

Summary of PhosphoSens® Kinase & Phosphatase Target Assay Strength Based on Reaction Rates					
Categories	Total	Strong	Strong (S)	Med. (M)	Weak (W)
Initial Rate (RFU/pmole/min)		>1000	300-999	100-299	<100
# Assays by Category	384	290	54	40	0
% Assays by Category		76%	14%	10%	0%
% Assays Very Strong or Strong		90%		Being improved	

Table 2.

Protocol Comments for Optimal Assay	
1	5 ng/ μ l CaM, 0.4 mM CaCl ₂
2	Activated (+0.5nM SRC)
3	Activated (+ poly(rI:C))
4	Activated (+ tRNA)
5	Uses inactive ERK2
6	Uses full-length ASK1
7	10 mM KCl
8	1 mM AMP
9	1 mM cGMP
10	Uses inactive MEK1/ERK2

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.

Note: Substrate concentrations range from 10-15 μ M