

Calbiochem®

Protein Kinases and Related Tools

*"Advanced Tools For
Advanced Research"*

Merck Biosciences

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Protein Phosphorylation Et Protein Kinases

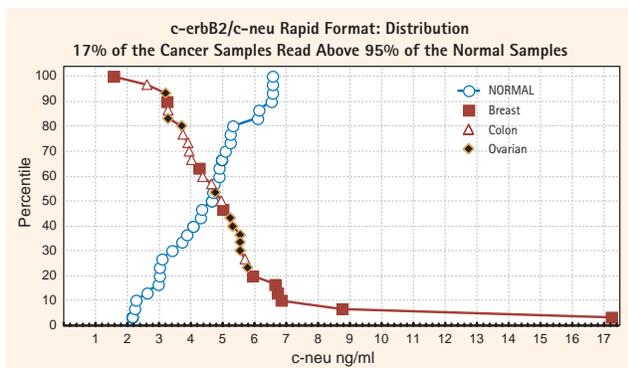
Protein phosphorylation corresponds to one of the most important molecular mechanisms by which extracellular signals produce their biological responses in cells. Stimulation of protein kinases is considered to be one of the most common activation mechanism in signal transduction systems. Protein phosphorylation systems are composed of at least three components: (a) phosphoproteins, that alter their properties during phosphorylation-dephosphorylation; (b) protein kinases, that transfer a phosphate group from ATP to specific serine, threonine, or tyrosine residues on proteins; and (c) protein phosphatases, that dephosphorylate the phosphoproteins, thereby restoring the particular protein phosphorylation system to its basal stage.

The eukaryotic protein kinases constitute one of the largest superfamilies of homologous proteins that are related by virtue of their catalytic domains. Most related protein kinases are specific for either serine/threonine or tyrosine phosphorylation. At least three principal mechanisms have been proposed for the activation of various protein kinases. Figure 17 outlines some of the major pathways involved in the regulatory mechanisms. Many substrates are known to undergo phosphorylation by multiple protein kinases. Most protein kinases possess a 30 - 32 kDa catalytic domain that is well-conserved throughout the phylogeny. A considerable amount of information on primary sequence of the catalytic domains of various protein kinases has been published. These sequences share a large number of residues involved in ATP binding, catalysis, and maintenance of structural integrity. Protein kinases have a latent catalytic activity and removal of the inhibitory constraints induces activation of the enzyme.

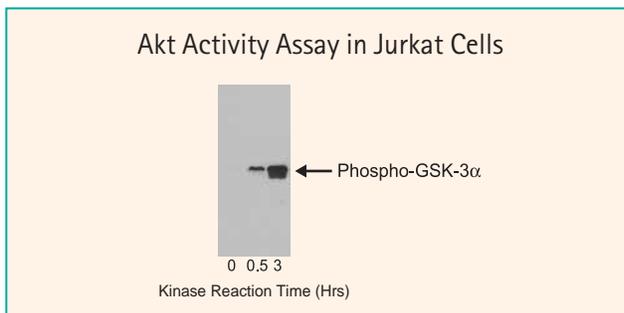
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Protein Kinases & Related Products



Accurately detect c-erbB2/c-neu in human sera in only 4 h with high sensitivity. The Rapid Format ELISA (Cat. No. QIA10) has 17% clinical sensitivity (ability to recognize affected individuals) at 95% clinical specificity (ability to recognize unaffected individuals).



Specifically detect Akt without radioactivity. The Akt Activity Assay Kit (Cat. No. 124007) utilizes an Akt-specific antibody to specifically enrich Akt from human, mouse, or rat cell lysates by immunoprecipitation. Akt activity is then tested for by the ability of precipitated Akt to phosphorylate GSK-3 α followed by detection via immunoblotting using an anti-GSK-3 α antibody. Other kinase activities are not detected.

Protein Kinase Assay Kits

Product	Cat. No.	Size
Akt Activity Assay Kit	124007	1 kit
Akt, Phospho-Specific (Ser ⁴⁷³) ELISA Kit	CBA005	1 kit
Akt, Phospho-Specific (Thr ³⁰⁸) ELISA Kit	CBA004	1 kit
Epidermal Growth Factor Receptor ELISA Kit	QIA35 [§]	1 kit
c-ErbB2/c-Neu Rapid Format ELISA Kit	QIA10	1 kit
ERK1/2, Phospho-Specific (Thr ¹⁸⁵ /Tyr ¹⁸⁷) ELISA Kit	CBA006	1 kit
JNK Activity Immunoassay Kit	420115	1 kit
JNK1/2, Phospho-Specific (Thr ¹⁸³ /Tyr ¹⁸⁵) ELISA Kit	CBA007	1 kit
p38 MAP Kinase, Phospho-Specific (Thr ¹⁸⁰ /Tyr ¹⁸²) ELISA Kit	CBA008	1 kit
Protein Kinase Assay Kit, Non-Radioactive*	539484	1 kit
Protein Kinase Assay Kit, Universal	539551	1 kit
Protein Kinase A Assay Kit	539490	1 kit
Protein Kinase C Assay Kit	539491	1 kit
Protein Tyrosine Kinase Assay Kit	539700	1 kit

Cyclic Nucleotide & ATP Assay Tools

ATP Assay Kit	119107	1 kit
ATP, Immobilized	119129	100 mg
Anti-cAMP (Rabbit)	116820	1 set
cAMP Direct Immunoassay Kit, Colorimetric	116811	1 kit
Anti-cGMP (Rabbit)	370659	1 set
Myokinase, Yeast	475941	1 ku

Antibodies to Adaptor Molecules

Anti-3BP2, Mouse (Sheep)	100070	250 μ g
Anti-Grb2 (195-217), Human (Rabbit)	368550	100 μ g
Anti-Grb2 (Ab-2), Human (Mouse)	OP124	100 μ g
Anti-Heregulin (Ab-2), Rat (Mouse)	OP123	100 μ g

*Not for sale in Japan; § Sold under license of U.S. Patent 4,943,533; 1 T = 1 test

Product	Cat. No.	Size
Anti-Shc, Phospho-Specific (Tyr ³¹⁷), Human (Mouse)	566809	1 set
Anti-pp36 T-Cell Adaptor Protein (26-46), Human (Rabbit)	516554	100 μ l
pp36 T-Cell Adaptor Protein (29-49) Blocking Peptide, Human	516556	100 μ g

Antibodies & Blocking Peptides to MAP Kinase Pathways

Anti-ERK5, Phospho-Specific (Thr ²¹⁸ , Tyr ²²⁰), Human (Rabbit)	442688	10 T
MAP Kinase-ERK5, Blocking Peptide, Phospho-Specific (Thr ²¹⁸ , Tyr ²²⁰), Human	442689	1 set
Anti-MAP Kinase (Ab-2), Rat (Rabbit)	PC54	100 μ g
Anti-MAP Kinase-Activated Protein Kinase 2, C-Terminal (344-360), Human (Rabbit)	442690	100 μ g
MAP Kinase-Activated Protein Kinase 2, C-Terminal (344-360), Blocking Peptide, Human	442691	100 μ g
Anti-MAP Kinase-Activated Protein Kinase 3 (368-382), Human (Rabbit)	442692	100 μ g
Anti-MAP Kinase ERK1/ERK2, Human (Rabbit)	442704	200 μ l
Anti-MAP Kinase ERK1/ERK2, Phospho-Specific (Thr ²⁰² /Tyr ²⁰⁴), Human (Mouse)	442706	1 set
Anti-MAP Kinase ERK1/ERK2 (333-367), Rat (Rabbit)	442675	100 μ g
Anti-MAP Kinase ERK1/ERK2, Phospho-Specific (Thr ²⁰² /Tyr ²⁰⁴), Human (Rabbit)	442685	100 μ l
Anti-MAP Kinase ERK2, Rat (Mouse)	442700	100 μ g
Anti-MAP Kinase ERK2, N-Terminal (6-17), Rat (Rabbit)	442680	100 μ g
MAP Kinase ERK2, N-Terminal (6-17) Blocking Peptide, Rat	442681	100 μ g
Anti-MAP Kinase ERK3 (303-325), Rat (Rabbit)	442683	100 μ g

Protein Kinases & Related Products

Antibodies ... MAP Kinase Pathways, cont.

Product	Cat. No.	Size
MAP Kinase ERK3 (303-325) Blocking Peptide, Rat	442684	100 µg
Anti-MEK1, C-Terminal (359-377), Human (Rabbit)	444946	100 µg
Anti-MEK1, N-Terminal (1-12), Rat (Rabbit)	444942	100 µg
MEK1, N-Terminal (1-12) Blocking Peptide, Rat	444943	100 µg
Anti-MEK1/MEK2, Phospho-Specific (Ser ^{217/221}), Human (Rabbit)	444955	100 µl
Anti-MEK1/2, Phospho-Specific (Thr ²⁹²), Human (Rabbit)	ST1001	100 µl
Anti-MEK1/2, Phospho-Specific (Thr ³⁸⁶), Human (Rabbit)	ST1002	100 µl
Anti-MEK2, Phospho-Specific (Thr ³⁹⁴), Mouse (Rabbit)	ST1017	10 T
Anti-MEK2, Phospho-Specific (Thr ³⁹⁴), Human (Rabbit)	ST1016	10 T
Anti-MEK1, Phospho-Specific (Ser ²⁹⁸), Human (Rabbit)	ST1015	10 T
Anti-MEK2 (1-13), Rat (Rabbit)	444949	100 µg
Anti-MEK5 (59-74), Human (Rabbit)	444954	100 µg
MEK5 (59-74) Blocking Peptide, Human	444956	100 µg
Anti-MEK6 (320-334), Human (Rabbit)	444958	100 µg
MEK6 (320-334) Blocking Peptide, Human	444960	100 µg
Anti-MEKK1, N-Terminal, Rat (Rabbit)	453701	100 µg
Anti-MKK3, Human (Rabbit)	475884	100 µl
Anti-MKK7, Human (Mouse)	ST1031	100 µg
Anti-cMos (149-177), Mouse (Rabbit)	475931	100 µg
cMos (149-177) Blocking Peptide, Mouse	475933	100 µg
Anti-p38/HOG1, C-Terminal (341-360), Human (Rabbit)	506115	100 µg
p38/HOG1, C-Terminal (341-360) Blocking Peptide, Human	506117	100 µg
Anti-p38 MAP Kinase, Human (Rabbit)	506123	200 µl
Anti-p38 MAP Kinase, Phospho-Specific (Thr ¹⁸⁰ , Tyr ¹⁸²), Human (Rabbit)	506119	10 tests
p38 MAP Kinase Blocking Peptide, Phospho-Specific (Thr ¹⁸⁰ , Tyr ¹⁸²), Human	506137	1 set
Anti-A-Raf1 (Ab-2), Human (Rabbit)	PC91	100 µg
Anti-Raf1 (252-269), Human (Rabbit)	543501	100 µg
Anti-A-Raf Protein Kinase, C-Terminal (584-597), Human (Rabbit)	553001	100 µg
A-Raf Protein Kinase, C-Terminal (584-597) Blocking Peptide, Human	553002	100 µg
Anti-c-Raf, Phospho-Specific (Ser ⁶²¹), Human (Mouse)	553010	100 µg
Anti-c-Raf, Phospho-Specific (Tyr ^{340/341}), Human (Rabbit)	553009	10 tests

Antibodies & Blocking Peptides to Protein Kinase A, B, C, & G

Product	Cat. No.	Size
Anti-Akt1 (Ab-1), Human (Rabbit)	PC510 [∇]	50 µl
Anti-Akt1, Phospho-Specific (Ser ⁴⁷³), Human (Mouse)	124003	1 set
Anti-Akt1, Phospho-Specific (Thr ³⁰⁸), Human (Rabbit)	124001	10 tests
Anti-Akt2 (Ab-1), Human (Rabbit)	PC511 [∇]	50 µl
Anti-Akt2, Rat (Rabbit)	124002	100 µl
Anti-Akt3 (Ab-1), Human (Rabbit)	PC512 [∇]	50 µl
Anti-Akt3, Rat (Rabbit)	124004	100 µl
Anti-Elk1, Phospho-Specific (Ser ³⁸³), Human (Rabbit)	324643	100 µl
Anti-Protein Kinase A Regulatory Subunit Iα, Human (Rabbit)	539232	100 µg
Anti-Protein Kinase A Regulatory Subunit Iβ, Human (Rabbit)	539233	100 µg
Anti-Protein Kinase A Regulatory Subunit IIα, Human (Rabbit)	539234	100 µg
Anti-Protein Kinase A Regulatory Subunit IIβ, Human (Rabbit)	539235	100 µg
Anti-Protein Kinase B (88-100), Human (Rabbit)	530311	100 µg
Protein Kinase B (88-100) Blocking Peptide, Human	530312	100 µg
Anti-Protein Kinase C (Ab-1), Human and Mouse (Rabbit)	PC20	100 µg
Anti-Protein Kinase C (Ab-2), Bovine (Mouse)	OP74	100 µg
Anti-Protein Kinase C _{consensus} (Ac543-549), Bovine, Human, Rabbit, and Rat (Rabbit)	539550	100 µl
Anti-Protein Kinase C _α (662-672), Rabbit (Rabbit)	539601	500 µl
Protein Kinase C _α (662-672) Blocking Peptide, Rabbit	539633	100 µg
Anti-Protein Kinase C _{α/β} (371-388) (Rabbit)	539507	100 µg
Protein Kinase C _{α/β} (371-388) Blocking Peptide	539534	100 µg
Anti-Protein Kinase C _{βI} (661-671), Human (Rabbit)	539603	500 µl
Anti-Protein Kinase C _{βI} (661-671), Rat (Rabbit)	539523	100 µl
Anti-Protein Kinase C _{βII} (660-673), Rat (Rabbit)	539526	100 µl
Anti-Protein Kinase C _{βII} (661-673), Human (Rabbit)	539605	500 µl
Protein Kinase C _{βII} (661-673) Blocking Peptide, Human	539637	100 µg
Anti-Protein Kinase C _γ (306-318), Bovine, Human, Rabbit, and Rat (Rabbit)	539529	100 µl
Anti-Protein Kinase C _γ (681-697), Human (Rabbit)	539611	500 µl
Protein Kinase C _γ (681-697) Blocking Peptide, Human	539643	100 µg

[∇] Trial Size Available; 1 T = 1 test

Protein Kinases & Related Products

Antibodies ... Protein Kinase A, B, C, & G, cont.

Product	Cat. No.	Size
Anti-Protein Kinase C _δ (658-676), Human (Rabbit)	539607	500 µl
Anti-Protein Kinase C _δ (662-673), Rat (Rabbit)	539532	100 µl
Anti-Protein Kinase C _δ , Phospho-Specific (Tyr ³¹¹), Mouse (Rabbit)	ST1019	10 T
Anti-Protein Kinase C _ε (721-737), Human (Rabbit)	539609	50 µl
Anti-Protein Kinase C _ε (728-737), Rat (Rabbit)	539535	100 µl
Protein Kinase C _ε (721-734) Blocking Peptide, Human	539641	100 µg
Anti-Protein Kinase C _η (672-683), Human (Rabbit)	539606	500 µl
Anti-Protein Kinase C _ζ (580-592), Rat (Rabbit)	539538	100 µl
Anti-Protein Kinase G, Bovine (Rabbit)	370661	50 µl
Anti-Protein Kinase G, C-Terminal (657-671), Human (Rabbit)	539729	100 µg
Protein Kinase G, N-Terminal (4-17) Blocking Peptide, Bovine and Human	539726	100 µg
Anti-Protein Kinase G, Iα and Iβ (Rabbit)	370652	100 µl

Antibodies to Protein Kinase Inhibitors

Anti-p27 ^{kip-1} (Ab-2), Human and Mouse (Mouse)	NA35	100 µg
Anti-p27 ^{kip-1} (Ab-3), Human (Mouse)	NA51	100 µg

Antibodies to Protein Kinase Substrates

Anti-AFX, Phospho-Specific (Ser ¹⁹³), Human (Rabbit)	121758	50 µg
Anti-Casein Kinase II Substrate, Phospho-Specific, Human (Mouse)	231576	100 µg
Anti-Cdk1 Substrate, Phospho-Specific (Thr ¹⁴ , Tyr ¹⁵), Human (Rabbit)	219441	10 T
Anti-Cdk1 Substrate, Phospho-Specific (Ab-1), Human (Rabbit)	PC456	25 µl
Anti-c-Jun, Phospho-Specific (Ser ⁷³), Human (Rabbit)	420114	100 µl
Anti-Elk1, Phospho-Specific (Ser ³⁸³), Human (Rabbit)	324643	100 µl
Anti-MacMARCKS, Mouse (Rabbit)	442708	100 µl
Anti-MARCKS, Mouse (Rabbit)	442707	100 µl
Anti-MARCKS, Phospho-Specific (Ser ^{159/163/179}), Mouse (Rabbit)	442709	100 µl
Anti-MARCKS, Phospho-Specific (Ser ^{152/156}), Rat (Rabbit)	442710	100 µl
Anti-PHAS-I (101-118), Human (Rabbit)	516676	100 µg
Anti-PHAS-II (99-120), Human (Rabbit)	516677	100 µg

Product	Cat. No.	Size
Anti-Phosphoinositide Dependent Kinase Substrate, Phospho-Specific (pSer) (Mouse)	524586	100 µg
Anti-Phosphoinositide Dependent Kinase Substrate, Phospho-Specific (pThr) (Mouse)	524585	100 µg
Anti-Protein Kinase A Substrate, Phospho-Specific (Mouse)	539236	100 µg
Anti-Protein Kinase G Substrate, Phospho-Specific (Mouse)	539725	100 µg
Anti-SIRPα1, C-Terminal (487-503), Human (Rabbit)	566310	100 µg

Antibodies & Blocking Peptides to Serine / Threonine Kinases

Anti-Autophosphorylation-Activated Protein Kinase (273-293), Human (Rabbit)	189476	50 µl
Anti-Ca ²⁺ /Calmodulin Kinase II, N-Terminal (7-20), Rat (Rabbit)	208703	100 µg
Anti-Ca ²⁺ /Calmodulin Kinase II, Phospho-Specific (Thr ²⁸⁶), Human (Rabbit)	208741	100 µl
Anti-Ca ²⁺ /Calmodulin Kinase II α-Subunit (Ab-1), Rat (Mouse)	NB12	100 µl
Anti-Ca ²⁺ /Calmodulin Kinase II α-Subunit Phosphorylated (Ab-2), Mouse and Rat (Mouse)	NB13	100 µl
Anti-Ca ²⁺ /Calmodulin Kinase IV (127-143), Mouse (Rabbit)	208691	100 µg
Anti-Ca ²⁺ /Calmodulin Kinase IV, C-Terminal (465-474), Rat (Rabbit)	208709	100 µg
Ca ²⁺ /Calmodulin Kinase IV, C-Terminal (465-474) Blocking Peptide, Rat	208714	100 µg
Anti-Ca ²⁺ /Calmodulin Kinase Kinase, C-Terminal (490-503), Rat (Rabbit)	208717	100 µg
Anti-Casein Kinase Iδ, Human (Goat)	ST1006	100 µl
Anti-Casein Kinase II, α-Subunit, Human (Mouse)	218703	100 µg
Anti-Casein Kinase II, α-Subunit (70-89), Human (Rabbit)	231573	100 µg
Casein Kinase II, α-Subunit (70-89) Blocking Peptide, Human	231575	100 µg
Anti-Casein Kinase II, β-Subunit, Human (Mouse)	218712	50 µg
Anti-Cdc2/Cdk1 (Ab-1), Human (Rabbit)	PC25	100 µg
Anti-Cdc2/Cdk1 (Ab-2) (Mouse)	CC01	100 µg
Anti-Cdc2/Cdk1 (Ab-3), <i>Xenopus</i> (Mouse)	CC16	100 µg
Anti-Cdk1 (263-297), Mouse (Rabbit)	217700	100 µg
Cdk1 (263-297) Blocking Peptide, Mouse	217701	100 µg
Anti-Cdk1, Phospho-Specific (Tyr ¹⁵), Human (Rabbit)	219440	100 µl
Anti-Cdk2 (Ab-1), Human (Rabbit)	PC44	100 µl
Anti-Cdk2, C-Terminal (283-298), Human (Rabbit)	219443	100 µg

∇ Trial Size Available; * Not for sale in Japan

Protein Kinases & Related Products

Antibodies ... Serine / Threonine Kinases, cont.

Product	Cat. No.	Size
Cdk2, C-Terminal (283-298) Blocking Peptide, Human	219444	100 µg
Anti-Cdk4, C-Terminal (277-297), Human (Rabbit)	219446	100 µg
Cdk4, C-Terminal (277-297) Blocking Peptide, Human	219447	100 µg
Anti-Cdk5 (Ab-1), Human (Mouse)	CC09L [∇]	100 µg
Anti-Cdk5, C-Terminal (268-283), Human (Rabbit)	219449	100 µg
Cdk5, C-Terminal (268-283) Blocking Peptide, Human	219450	100 µg
Anti-Cdk6 (Ab-1), Human (Mouse)	CC22L	100 µg
Anti-Cdk6 (Ab-2), Human (Mouse)	CC23L	100 µg
Anti-Cdk6, C-Terminal (306-326), Human (Rabbit)	219452	100 µg
Cdk6, C-Terminal (306-326) Blocking Peptide, Human	219453	100 µg
Anti-Cdk8, N-Terminal (1-15), Human (Rabbit)	217704	100 µg
Cdk8, N-Terminal (1-15) Blocking Peptide, Human	217706	100 µg
Anti-Chk1, Human (Sheep)	PC423	250 µg
Anti-Chk2 (Ab-2), Human (Mouse)	CC44	100 µg
Anti-Chk2, Human (Sheep)	220540	50 µg
Anti-Chk2/hCds1 (Ab-1), Human (Rabbit)	PC483 [∇]	100 µg
Anti-DAP Kinase 2 (356-370), Human (Rabbit)	251710	100 µg
Anti-DNA-PK (Ab-1), Human (Rabbit)	PC127 [∇]	100 µg
Anti-DNA-PK (Ab-2), Human (Mouse)	NA57 [∇]	100 µg
Anti-DNA-PK (4086-4096), Human (Rabbit)	317276	100 µg
DNA-PK (4086-4096) Blocking Peptide, Human	317277	100 µg
Anti-IKK α , Human (Mouse)	OP133 [∇]	100 µg
Anti-IKK β , Human (Mouse)	OP134 [∇]	100 µg
Anti-IKK γ (Ab-1), Human (Mouse)	OP135 [∇]	100 µg
Anti-IKK γ (400-416), Human (Rabbit)	400003	100 µg
Anti-IKKe/IKK- <i>i</i> (701-716), Human (Rabbit)	400004	100 µg
Anti-Interleukin-1 Receptor-Associated Kinase-M (581-596), Human (Rabbit)	407160	100 µg
Anti-MAGI, C-Terminal, Human (Sheep)	442660	250 µg
Anti-MAGI, N-Terminal, Human (Sheep)	442662	250 µg
Anti-NAK/TBK1 (712-727), Human (Rabbit)	477740	100 µg
Anti-NEMO-Like Kinase, Human (Mouse)	480645	100 µg
Anti-p65 ^{PAK} (484-502), Human (Rabbit)	506279	50 µl
Anti-PAK1/2/3, Phospho-Specific (Thr ⁴²³), Human (Rabbit)	ST1018	10 T
Anti-PAK3, N-Terminal (1-13), Mouse (Rabbit)	506277	100 µg
PAK3, N-Terminal (1-13) Blocking Peptide, Mouse	506278	100 µg

[∇] Trial Size Available; 1 T = 1 test

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Product	Cat. No.	Size
Anti-PI-3-Kinase, Human (Mouse)	528107	100 µg
Anti-PI-3-Kinase p110 δ , C-Terminal (1026-1044), Human (Rabbit)	526553	100 µl
PI-3 Kinase p110 δ , C-Terminal (1026-1044), Blocking Peptide, Human	526554	100 µg
Anti-PI-5-Kinase γ , C-Terminal (622-641), Mouse (Rabbit)	526557	100 µl
PI-5 Kinase γ , C-Terminal (622-641), Blocking Peptide, Mouse	526558	100 µg
Anti-PKR, Phospho-Specific (Thr ⁴⁵¹), Human (Rabbit)	527460	10 tests
Anti-Plk1, Human (Rabbit)	PC382	100 µg
Anti-PSTAIRE (Ab-1), Human and Mouse (Rabbit)	PC26L [∇]	100 µg
Anti-PSTAIRE (42-57), Human (Rabbit)	541330	100 µg
PSTAIRE (42-57) Blocking Peptide, Human	541331	100 µg
Anti-Rhodopsin Kinase 1a, Human (Mouse)	555522	100 µg
Anti-Rhodopsin Kinase 1a/1b, Human (Mouse)	555525	100 µg
Anti-Ribosomal S6 Kinase, C-Terminal (488-502), Human and Rat (Rabbit)	559281	100 µg
Ribosomal S6 Kinase, C-Terminal (488-502) Blocking Peptide	559283	100 µg
Anti-Ribosomal S6 Kinase II $\alpha 2$ (604-617), Mouse (Rabbit)	559371	100 µg
Anti-C-TAK1, Human (Sheep)	322400	250 µg
Anti-ZIP Kinase (279-298), Human (Rabbit)	691700	100 µg

Antibodies to GSK-3

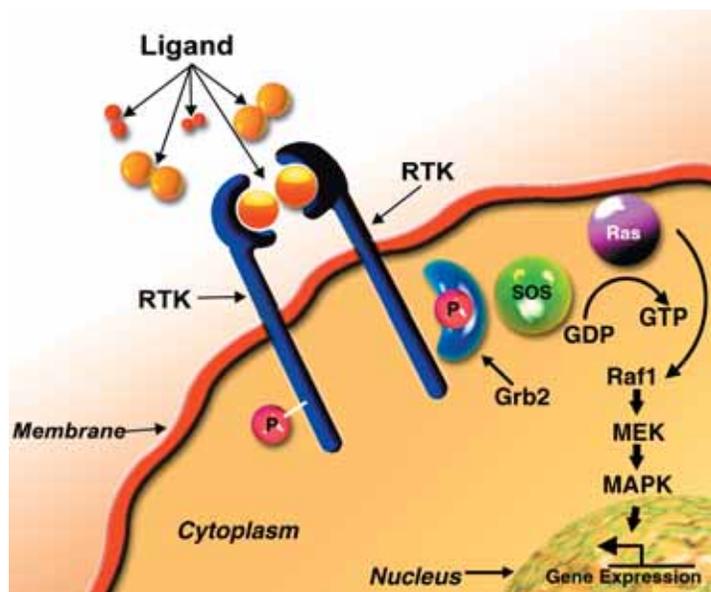
Anti-Glycogen Synthase Kinase 3 β , C-Terminal (334-348), Rat (Rabbit)	361528	100 µg
Glycogen Synthase Kinase 3 β , C-Terminal (334-348) Blocking Peptide, Rat	361529	100 µg
Anti-Glycogen Synthase Kinase 3 β , Phospho-Specific (Ser ⁹), Human (Mouse)	361527	1 set
Anti-Glycogen Synthase Kinase, Phospho-Specific (Ser ^{645/649/653/657}) (Ab-1), Human (Rabbit)	PC457 [∇]	25 µl
Anti-Glycogen Synthase Kinase-3 β (Ser ⁹) (Ab-1), <i>Xenopus</i> (Rabbit)	PC242	50 µg
Anti-GSK-3 α/β , Phospho-Specific (Tyr ^{279/216}), Human (Rabbit)	ST1013	10 T

Antibodies & Blocking Peptides to Stress-Activated Protein (SAP) Kinase Pathways

Anti-GCK, N-Terminal (1-14), Human (Rabbit)	371893	100 µg
GCK, N-Terminal (1-14) Blocking Peptide, Human	371891	100 µg
Anti-HPK1 (473-490), Mouse (Rabbit)	403781	100 µg

Protein Kinases & Related Products

Receptor and Non-receptor Protein Tyrosine Kinases



Protein tyrosine kinases (PTKs) catalyze the transfer of the γ -phosphoryl group from ATP to tyrosine hydroxyls of proteins. They are involved in regulating signaling processes in a wide variety of cellular functions, including cell proliferation and differentiation. Unregulated activation or over expression of PTKs has been linked to various forms of cancers and benign proliferative conditions. Abnormal PTK signaling has also been reported in diabetes, inflammation, and other diseases.

The receptor PTKs remain inactive until a ligand binds to the receptor, which leads to the dimerization of two ligand-bound receptors. Once activated, receptors are able to autophosphorylate tyrosine residues outside the catalytic domain. This autophosphorylation stabilizes the active receptor conformation and creates phosphotyrosine-docking sites for proteins that transduce signals within the cell. The cytosolic portion of phosphorylated receptor is capable of recruiting a number of cytosolic adapter proteins via interactions between phosphorylated tyrosine residues on the receptor and the SH2 (Src homology 2) domain on the adapter molecule. Several signaling proteins, such as Ras-GAP, PI 3-kinase, and phospholipase C, can bind to the intracellular domain of receptor PTKs in a phosphotyrosine-dependent manner. Grb2 binding to phosphotyrosine residues changes its conformation and allows it to bind to proline-rich sequences in the carboxy terminal tail of Sos, a GDP-GTP exchange protein. This binding displaces an inhibitory domain in Sos. The activation of Sos allows it to translocate to the plasma membrane where it causes an exchange of GDP for GTP and activation of Ras. Ras binds

to the N-terminus of Raf and recruits it to the inner surface of the plasma membrane, where it is phosphorylated by protein kinase C. Translocation of Raf to the membrane positions it in direct proximity of MAP kinase kinase (MEK; MAPKK). Raf phosphorylates MEK, which in turn phosphorylates MAP kinase (MAPK).

The non-receptor PTKs include members of the Src, Tec, JAK, Fes, Abl, FAK, Csk, and Syk families. They are located in the cytoplasm as well as in the nucleus and play important roles in cellular signaling. In most cases, their activation begins with the phosphorylation of a tyrosine residue present in an activation loop. While there is a striking homology in the catalytic sequences of these enzymes, they diverge greatly in their regulatory and non-enzymatic sequences. They exhibit distinct kinase regulation, substrate phosphorylation, and function.

Due to their involvement in various forms of cancers, PTKs have become prominent targets for therapeutic intervention. Selective receptor and non-receptor PTK inhibitors represent a promising class of anti-tumor agents. For example, quinazoline compounds, such as PD 168393 (Cat. No. 513033) and PD156273 (Cat. No. 513032) are highly potent and selective inhibitors of EGF receptor tyrosine kinase activity and are shown to block tumor cell growth both *in vitro* and *in vivo*. Selected indolinone compounds, such as SU6656 (Cat. No. 572635), have been shown to be potent and selective inhibitor of Src family of non-receptor tyrosine kinases.

Protein Kinases & Related Products

Antibodies ... SAP Kinase Pathways, cont.

Product	Cat. No.	Size
Anti-JKK1, C-Terminal (347-363), Human (Rabbit)	409311	100 µg
JKK1, C-Terminal (347-363) Blocking Peptide, Human	409313	100 µg
Anti-JNK, Phospho-Specific (Thr ¹⁸³ /Tyr ¹⁸⁵), Human (Rabbit)	PC452	25 µl
Anti-Mxi2, N-Terminal, Human (Mouse)	475955	100 µg
Anti-SAPK/JNK, Human (Rabbit)	559304	200 µl
Anti-SAPKα, N-Terminal (1-16), Rat (Rabbit)	559306	100 µg
SAPKα, N-Terminal (1-16) Blocking Peptide, Rat	559308	100 µg
Anti-SAPKβ, N-Terminal (1-16), Rat (Rabbit)	559311	100 µg
SAPKβ, N-Terminal (1-16) Blocking Peptide, Rat	559314	100 µg
Anti-SAPKγ, N-Terminal (1-15), Rat (Rabbit)	559316	100 µg
SAPKγ, N-Terminal (1-15) Blocking Peptide, Rat	559318	100 µg
Anti-SAP Kinase 1/2, Phospho-Specific, Human (Mouse)	559321	100 µg
Anti-SAP Kinase 2α, Human (Mouse)	559322	100 µg
Anti-SAP Kinase 2δ, Human (Mouse)	559323	100 µg
Anti-SEK1, C-Terminal (378-395), Mouse (Rabbit)	563103	100 µg
SEK1, C-Terminal (378-395) Blocking Peptide, Mouse	563107	100 µg
Anti-SEK1/MKK4, Phospho-Specific (Thr ²⁶¹), Human (Rabbit)	564970	100 µl

Antibodies & Blocking Peptides to Tyrosine Kinases

Anti-c-Abl (Ab-2) (Mouse)	OP19	100 µg
Anti-c-Abl (Ab-3) (Mouse)	OP20 [∇]	100 µg
Anti-Bcr (Ab-1), Human (Rabbit)	PC02L	100 µg
Anti-Bcr (Ab-2), Human (Mouse)	OP26	100 µg
Anti-3BP2, Mouse (Sheep)	100070	250 µg
Anti-Bruon's Tyrosine Kinase, Human (Mouse)	203665	50 µl
Anti-Elk1, Human (Rabbit)	324641	100 µl
Anti-Elk1, Phospho-Specific (Ser ³⁸³), Human (Rabbit)	324643	100 µl
Anti-EphB1, Cytoplasmic Tyrosine Kinase Domain, Human (Sheep)	324828	250 µg
Anti-EphB1, Extracellular Domain, Human (Sheep)	324829	250 µg
Anti-Epidermal Growth Factor Receptor (Ab-1), Human (Mouse)	GR01 [§]	100 µg
Anti-Epidermal Growth Factor Receptor (Ab-1), Human (Mouse)	GR01L [§]	100 µg
Anti-Epidermal Growth Factor Receptor (Ab-3), Human (Mouse)	GR13 [§]	100 µg

Product	Cat. No.	Size
Anti-Epidermal Growth Factor Receptor (Ab-3), Human (Mouse)	GR13L [§]	100 µg
Anti-Epidermal Growth Factor Receptor (Ab-5), Human (Mouse)	GR15	100 µg
Anti-Epidermal Growth Factor Receptor (1161-1186), Rat (Rabbit)	324866	100 µl
Anti-Epidermal Growth Factor Receptor (Ab-6), Mouse (Rabbit)	PC98	100 µg
Anti-Epidermal Growth Factor Receptor, Phospho-Specific (Ser ¹⁰⁴⁷), Human (Mouse)	324863	1 set
Anti-Epidermal Growth Factor Receptor, Phospho-Specific (Tyr ⁸⁴⁵), Human (Rabbit)	324865	10 tests
Anti-Epidermal Growth Factor Receptor, Phospho-Specific (Tyr ⁹⁹²), Human (Rabbit)	ST1007	10 T
Anti-Epidermal Growth Factor Receptor, Phospho-Specific (Tyr ¹⁰⁶⁸), Human (Rabbit)	324867	10 tests
Anti-Epidermal Growth Factor Receptor, Phospho-Specific (Tyr ¹¹⁷³), Human (Mouse)	324864	1 set
Anti-c-ErbB2/c-Neu (Ab-1), Human (Rabbit)	PC04	100 µg
Anti-c-ErbB2/c-Neu (Ab-2), Human (Mouse)	OP14 [∇]	100 µg
Anti-c-ErbB2/c-Neu (Ab-2), Human (Mouse)	OP14L	100 µg
Anti-c-ErbB2/c-Neu (Ab-3), Human (Mouse)	OP15 [∇]	100 µg
Anti-c-ErbB2/c-Neu (Ab-3), Human (Mouse)	OP15L	100 µg
Anti-c-ErbB2/c-Neu (Ab-3), Human (Mouse), Fluorescein Conjugate	OP15F	100 µg
Anti-c-ErbB2/c-Neu (Ab-4), Human (Mouse)	OP16	100 µg
Anti-c-ErbB2/c-Neu (Ab-4), Human (Mouse)	OP16L	100 µg
Anti-c-ErbB2/c-Neu (Ab-5), Human (Mouse)	OP39	100 µg
Anti-c-ErbB2/c-Neu (Ab-6), Human (Mouse)	OP67	100 µg
Anti-c-ErbB2/c-Neu (Ab-7), Human (Mouse)	OP82	100 µg
Anti-c-ErbB3 (Ab-1), Human (Rabbit)	PC27L	100 µg
Anti-c-ErbB3 (Ab-4), Human (Mouse)	OP119	100 µg
Anti-c-ErbB3 (Ab-5), Human (Mouse)	OP120	100 µg
Anti-c-ErbB4 (Ab-1), Human (Mouse)	OP121	100 µg
Anti-c-ErbB4 (Ab-2), Human (Mouse)	OP122	100 µg
Anti-FAK, Human (Rabbit)	PC314	500 µg
Anti-FAK, Phospho-Specific (Tyr ³⁹⁷), Human (Rabbit)	341292	10 tests
FAK, Blocking Peptide, Phospho-Specific (Tyr ³⁹⁷), Human	341293	1 set
Anti-FAK, Phospho-Specific (Tyr ⁴⁰⁷), Human (Rabbit)	ST1010	10 T
Anti-FAK, Phospho-Specific (Tyr ⁵⁷⁶), Human (Rabbit)	341294	10 tests
FAK, Blocking Peptide, Phospho-Specific (Tyr ⁵⁷⁶), Human	341295	1 set
Anti-FAK, Phospho-Specific (Tyr ⁵⁷⁷), Human (Rabbit)	ST1011	10 T
Anti-FAK, Phospho-Specific (Ser ⁷²²), Human (Rabbit)	ST1008	10 T
Anti-FAK, Phospho-Specific (Ser ⁸⁴³), Mouse (Rabbit)	ST1009	10 T

* Not for sale in Japan; ∇ Trial Size Available; § Sold under license of U.S. Patent 4,943,533; 1 T = 1 test

Protein Kinases & Related Products

Antibodies ... Tyrosine Kinases, cont.

Product	Cat. No.	Size
Anti-Fit-3, Cytoplasmic Domain, Mouse (Rabbit)	343014	50 µg
Anti-Fit-3, Extracellular Domain, Mouse (Rabbit)	343015	50 µg
Anti-Fit-4, Mouse (Rabbit)	343009	50 µg
Anti-Hek, Human (Mouse)	OP131	100 µg
Anti-IGF-I Receptor (Ab-1), Human (Mouse)	GR11 [∇]	100 µg
Anti-IGF-I Receptor (Ab-1), Human (Mouse)	GR11L	100 µg
Anti-IGF-I Receptor (Ab-2), Human (Goat)	PC196L	100 µg
Anti-IGF-I Receptor (Ab-4), Human (Mouse)	GR38	100 µg
Anti-IGF-I Receptor, α-Subunit, Human (Mouse)	407246	100 µg
Anti-Insulin Receptor (Ab-1), Human (Mouse)	GR05	100 µg
Anti-Insulin Receptor (Ab-3), Human (Mouse)	GR07 [∇]	100 µg
Anti-Interleukin-1 Receptor-Associated Kinase-2, Human (Rabbit)	PC489	100 µg
Anti-Lck, Phospho-Specific (Ser ¹⁵⁸), Human (Rabbit)	ST1014	10 T
Anti-Lck, Phospho-Specific (Tyr ⁵⁰⁵), Human (Rabbit)	428100	10 tests
Anti-Nerve Growth Factor Receptor, Rat (Mouse)	GR10	100 µg
Anti-PKR, Phospho-Specific (Thr ⁴⁵¹), Human (Rabbit)	527460	10 t
Anti-PDGFR Receptor β (Ab-1), Mouse (Rabbit)	PC17	100 µg
Anti-Pyk2, Phospho-Specific (Tyr ⁴⁰²), Human (Rabbit)	549900	10 t
Anti-Pyk2, Phospho-Specific (Tyr ⁴⁰²), Human (Mouse)	549902	100 µg
Anti-Pyk2, Phospho-Specific (Tyr ⁵⁷⁹), Human (Rabbit)	549905	10 T
Anti-Pyk2, Phospho-Specific (Tyr ^{579/580}), Human (Rabbit)	ST1023	10 T
Anti-Pyk2, Phospho-Specific (Tyr ⁵⁸⁰), Human (Rabbit)	ST1021	10 T
Anti-Pyk2, Phospho-Specific (Tyr ⁸⁸¹), Human (Rabbit)	ST1022	10 T
Anti-RON, Phospho-Specific (Tyr ^{1238/1239}), Human (Rabbit)	557346	10 T
Anti-Shc, Phospho-Specific (Tyr ^{239/240}), Human (Mouse)	566808	1 set
Anti-Shc, Phospho-Specific (Tyr ³¹⁷), Human (Mouse)	566809	1 set
Anti-Shc/p66, Phospho-Specific, Human (Mouse)	566807	1 set
Anti-v-Src (Ab-1) (Mouse)	OP07 [∇]	100 µg
Anti-v-Src (Ab-1) (Mouse)	OP07L	100 µg

Product	Cat. No.	Size
Anti-v-Src (Ab-1), Human (Mouse) Agarose Conjugate	OP07A	0.5 ml
Anti-Src, Phospho-Specific (Tyr ⁴¹⁶), Human (Mouse)	569372	100 µg
Anti-Src, Phospho-Specific (Tyr ⁴¹⁸), Human (Rabbit)	569373	10 T
Anti-Src, Phospho-Specific (Tyr ⁵²⁹), Human, (Rabbit)	569374	10 T
Anti-Syk, Human (Mouse)	574710	100 µg
Anti-TIE1, C-Terminal, Human (Rabbit)	610200	50 µg
Anti-TIE2, N-Terminal, Human (Rabbit)	610204	50 µg
Anti-Tie2, Phospho-Specific (Tyr ^{1094/1100}) (Ab-1), Human (Rabbit)	PC449 [∇]	25 µl
Anti-Tie2, Phospho-Specific (Tyr ^{1108/1117}) (Ab-2), Human (Rabbit)	PC450	25 µl
Anti-c-Trk, Human (Rabbit)	PC31	100 µg
Anti-Tyk2, Phospho-Specific (Tyr ^{1054/1055}), Human (Rabbit)	656000	100 µl

Antibodies & Detection Tools for Phosphoamino Acids

Phosphoprotein Enrichment Kit	525278	1 kit
Phosphoserine Detection Kit	525282	1 kit
Anti-Phosphoserine (4A3) (Mouse)	525283	1 set
Anti-Phosphoserine (4A9) (Mouse)	525284	1 set
Anti-Phosphoserine (16B4) (Mouse)	525280	1 set
Anti-Phosphoserine (1C8) (Mouse)	525281	1 set
Phosphothreonine Detection Kit	525288	1 kit
Anti-Phosphothreonine (14B3) (Mouse)	525286	1 set
Anti-Phosphothreonine (1E11) (Mouse)	525287	1 set
Anti-Phosphothreonine (4D11) (Mouse)	525289	1 set
Phosphotyrosine Detection Kit	525322	1 kit
Phosphotyrosine Molecular Weight Markers	525324	1 set
Anti-Phosphotyrosine (Ab-1) (Mouse)	PT01L	200 µg
Anti-Phosphotyrosine (Ab-1) (Mouse) Agarose Conjugate	PT02	0.25 ml
Anti-Phosphotyrosine (2C8) (Mouse)	525293	100 µg
Anti-Phosphotyrosine (PY20) (Mouse)	525295	100 µg
Anti-Phosphotyrosine (PY20) (Mouse) Agarose Conjugate	525300	500 µl
Anti-Phosphotyrosine (PY20) (Mouse) Biotin Conjugate	525310	100 µg
Anti-Phosphotyrosine (PY20) (Mouse) Peroxidase Conjugate	525320	100 µg
Anti-Phosphotyrosine (Rabbit)	525290	100 µg

* Not for sale in Japan; [∇] Trial Size Available; 1 T = 1 test

Protein Kinases & Related Products

Protein Kinase C Recombinant Standards

Product	Cat. No.	Size
Protein Kinase C _α Standard, Human, Recomb.	539617	500 ng
Protein Kinase C _{βI} Standard, Human, Recomb.	539619	500 ng
Protein Kinase C _{βII} Standard, Human, Recomb.	539621	500 ng
Protein Kinase C _γ Standard, Human, Recomb.	539627	500 ng
Protein Kinase C _δ Standard, Human, Recomb.	539623	500 ng
Protein Kinase C _ε Standard, Human, Recomb.	539625	500 ng
Protein Kinase C _μ Standard, Human, Recomb.	539632	100 μl
Protein Kinase C _ζ Standard, Human, Recomb.	539631	500 ng

Purified Enzymes

Abl Protein Tyrosine Kinase, Recomb., <i>E. coli</i>	102555	2000 U
Akt1 Kinase, His•Tag®, Activated, Human, Recombinant, <i>S. frugiperda</i>	124006	20 μg
Ca ²⁺ /Calmodulin Kinase II, Rat Brain	208707	500 ng 1 μg
Ca ²⁺ /Calmodulin Kinase II, α-Subunit, Rat Recomb.	208706	5000 U
Casein Kinase II, Human, Recomb., <i>E. coli</i>	218698	10 mU
Casein Kinase II, Human, Recomb., <i>E. coli</i>	218701	10 KU
Casein Kinase II, α-Subunit, Human, Recomb., <i>E. coli</i>	218704	10 mU
Casein Kinase II, β-Subunit, Human, Recomb., <i>E. coli</i>	218711	10 μg
Cdk5 Activator, p35, GST-Fusion, Bovine, Recomb., <i>E. coli</i>	480741	250 U
Cdk5 Activator, p39, GST-Fusion, Human, Recomb., <i>E. coli</i>	480742	250 U
Chk1, His•Tag®, Human, Recomb.	220479	10 μg
Csk, His•Tag®, Human, Recomb., <i>E. coli</i>	238705	10 μg
Cyclin Dependent Kinase 5	219459	250 U
Epidermal Growth Factor Receptor Tyrosine Kinase, Human A431 Cells	324858	10 U
FGFR4, Cytoplasmic Domain, His•Tag®, Human, Recomb.	341606	10 μg
Fgr, His•Tag®, Human, Recomb.	341524	10 μg
FynT, His•Tag®, Human, Recomb.	344945	10 μg
Glycogen Synthase Kinase 3β-Isozyme, Rabbit Skeletal Muscle, Recomb., <i>E. coli</i>	361526	10 KU
β-Insulin Receptor Kinase, GST-Fusion, Human, Recomb.	407697	20 μg
JNK2α2, His•Tag®, Human, Recomb., <i>E. coli</i>	420124	100 μg
c-Jun N-Terminal Kinase, Rat, Recomb. <i>E. coli</i>	420105	20 μg
c-Kit, Cytoplasmic Domain, His•Tag®, Human, Recomb.	422690	10 μg
Lck, His•Tag®, Human, Recomb.	428200	10 μg
LynA, His•Tag®, Human, Recomb.	440210	10 μg
LynB, His•Tag®, Human, Recomb.	440212	10 μg

Product	Cat. No.	Size
MAP Kinase, Activated, Mouse, Recomb., <i>E. coli</i>	454850	2000 U
MAP Kinase, Activated, Rat, Recomb., <i>E. coli</i>	454855	5 μg
MAP Kinase, Non-Activated, Rat, Recomb. <i>E. coli</i>	454852	20 μg
MAP Kinase 1, His•Tag®, Activated, Human, Recomb., <i>E. coli</i>	454849	2.5 μg
MAP Kinase 2, His•Tag®, Activated, Human, Recomb., <i>E. coli</i>	454854	5 μg
MAP Kinase ERK1-GST-Fusion, Human, Recomb., Agarose Conjugate	442673	100 μg
[Ala ⁷¹]-MAP Kinase ERK1, Inactive, Human, Recomb., Agarose Conjugate	442674	100 μg
p13 ^{suc1} Protein, Yeast, Recomb.	506112	100 μg
p13 ^{suc1} Protein, Yeast, Recomb., Agarose Conjugate	506113	100 μg
p34cdk1/Cyclin B, Human, Recomb., <i>Spodoptera frugiperda</i>	506114	200 U
p38-GST-Fusion, Mouse, Recomb.	506122	50 μg
PDK1, His•Tag®, Human, Recomb.	521270	5 μg
Pim1-GST-Fusion, Human, Agarose Conjugate	526531	100 μg
Protein Kinase A, Catalytic Subunit, Bovine Heart	539486	1000 U
Protein Kinase A, Catalytic Subunit, Mouse, Recomb., <i>E. coli</i>	539481	100 KU
Protein Kinase C, Rat Brain	539494	50 μl
Protein Kinase C, Catalytic Subunit, Rat Brain	539513	200 ng
Protein Kinase C Isozyme Sampler Set	539674	1 set
Protein Kinase C _α , Human, Recomb., <i>Spodoptera frugiperda</i>	539650	5 μg 20 μg
Protein Kinase C _{βI} , Human, Recomb., <i>Spodoptera frugiperda</i>	539655	5 μg 20 μg
Protein Kinase C _{βII} , Human, Recomb., <i>Spodoptera frugiperda</i>	539657	5 μg 20 μg
Protein Kinase C _γ , Human, Recomb., <i>Spodoptera frugiperda</i>	539665	5 μg 20 μg
Protein Kinase C _δ , Human, Recomb., <i>Spodoptera frugiperda</i>	539672	5 μg 20 μg
Protein Kinase C _ε , Human, Recomb., <i>Spodoptera frugiperda</i>	539660	5 μg 20 μg
Protein Kinase C _ζ , Human, Recomb., <i>Spodoptera frugiperda</i>	539670	5 μg 20 μg
Protein Kinase C _η , Human, Recomb., <i>Spodoptera frugiperda</i>	539673	5 μg 20 μg
Protein Kinase C _θ , His•Tag®, Human, Recomb.	539677	5 μg
Protein Kinase G, Isoform Iα, Bovine, Recomb., <i>Spodoptera frugiperda</i>	370650	100 KU
SAPKβ GST-Fusion, Rat, Recomb., <i>E. coli</i> , Agarose Conjugate	559310	100 μg

Protein Kinases & Related Products

Purified Enzymes, cont.

Product	Cat. No.	Size
SAPK β (K55R) GST-Fusion, Rat, Recomb., <i>E. coli</i> , Agarose Conjugate	559312	100 μ g
SAP Kinase 2 α , His•Tag®, Activated, Human, Recomb., <i>E. coli</i>	559324	20 μ g
SEK1 (K129R)-GST-Fusion, Mouse, Recomb., <i>E. coli</i> , Agarose Conjugate	563101	100 μ g
SrcN1, Human, Recombinant	567820	10 μ g
p60 ^{c-src} Enzyme	PK03	200 U
Yes, His•Tag®, Human, Recomb.	688150	10 μ g

Protein Kinase Peptides, Probes, & Substrates

AKTide-2T	123900	1 mg
AKTide-SA	123905	1 mg
Autocamtide-2	189475	500 μ g
Autocamtide-3	189483	500 μ g
Ca ²⁺ /Calmodulin Kinase II Substrate	208699	1 mg
Ca ²⁺ /Calmodulin Kinase II Substrate 281-291	208708	500 μ g
Casein Kinase I Substrate	218730	500 μ g
Casein Kinase II Substrate	218731	1 mg
Cdk1 Substrate II	217705	500 μ g
Cdk5 Substrate	219451	500 μ g
p34 ^{cdk1} Substrate	219425	500 μ g
Crosstide	233612	1 mg
CREBtide	238464	1 mg
GSK-3 α (12-30), GST-Fusion, Human, Recomb., <i>E. coli</i>	361522	100 μ g
GSK-3 β Substrate	361530	1 mg
GSK-3 β Substrate, Negative Control	361531	1 mg
Histone H1, Calf Thymus	382150	1 mg 5 mg
JNK Substrate, c-Jun 1-79	420108	100 μ g
c-Jun (1-79)-GST-Fusion, Human, Recomb., <i>E. coli</i> , Agarose Conjugate	420109	100 μ g
Kemptide	05-23-4900	1 mg 5 mg
MAP Kinase Substrate, EGF-Receptor (661-681) T669 Peptide	454857	1 mg
MAP Kinase Substrate, Tyrosine Hydroxylase 24-33	454860	1 mg
MARCKS PSD-Derived Peptide, PKC Substrate	454880	250 μ g
Myelin Basic Protein Peptide Substrate	475920	1 mg
PHAS-I, Rat, Recomb.	516675	250 μ g
Protein Kinase B α Substrate	539622	1 mg
Protein Kinase C Selectide™ Substrate	527151	500 μ g
Protein Kinase C Selective Substrate	527154	500 μ g
Protein Kinase C Specific Substrate	527155	500 μ g
Protein Kinase C Substrate, Glycogen Synthase 1-8	361600	500 μ g

Product	Cat. No.	Size
Protein Kinase C Substrate, MBP 4-14	539492	1 mg
Protein Kinase C δ Peptide Substrate	539563	500 μ g
Protein Kinase C ϵ Peptide Substrate	539562	500 μ g
Protein Kinase C η Substrate, Biotinylated	539666	500 μ g
Protein Kinase C μ Peptide Substrate	539564	500 μ g
Protein Kinase C θ Substrate, Biotinylated	539668	500 μ g
Protein Kinase C ζ Substrate, Biotinylated	539667	500 μ g
Protein Kinase G Substrate, BPDEtide	203678	1 mg
Protein Kinase G Substrate, Glasstide	539626	1 mg
Protein Kinase G Substrate, G-Subtide	539628	1 mg
Raytide™ Substrate	PK02	200 μ g
Raytide™ EL Substrate	PK04	200 μ g
RIM-1	557325	250 μ g
RSK Substrate, S6 231-239	559280	500 μ g
Src Peptide 521-533	567800	1 mg
Src Peptide 521-533, Phosphorylated	567801	1 mg
Src Substrate II	567812	1 mg
Src Substrate II, Phosphorylated	567814	1 mg
Syntide 2	05-23-4910	5 mg

Protein Kinase Activators

Adenosine Monophosphate-Activated Protein Kinase (AMPK) Activator

AICA-Riboside	123040	50 mg
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Insulin Receptor Tyrosine Kinase (IRTK) Activators

IRTK Activator	420295	5 mg
IRTK Activator, Negative Control	420296	5 mg

Mitogen Activated Protein (MAP) Kinase Activators

Anandamide	172100	5 mg
Anisomycin, <i>Streptomyces griseolus</i>	176880	10 mg
Aurintricarboxylic Acid	189400	100 mg
Pam ₃ Cys-Ser-(Lys) ₄ , Hydrochloride	506350	2 mg
D-erythro-Sphingosine, N-Hexanoyl-	376650	5 mg
D-erythro-Sphingosine, N-Octanoyl-	219540	5 mg
Sphingosylphosphorylcholine	567735	10 mg

Protein Kinase A (PKA) Activators

Adenosine 3',5'-cyclic Monophosphate, Sodium Salt	116801	100 mg 1 g
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Protein Kinases & Related Products

Protein Kinase A (PKA) Activators, cont.

Product	Cat. No.	Size
Adenosine 3',5'-cyclic Monophosphate, N ⁶ -Benzoyl-, Sodium Salt	116802	10 µmol
Adenosine 3',5'-cyclic Monophosphate, N ⁶ -Benzyl-, Sodium Salt	116809	10 µmol
Adenosine 3',5'-cyclic Monophosphate, 8-Bromo-, Sodium Salt	203800	10 mg
Adenosine 3',5'-cyclic Monophosphate, 8-Chloro-, Sodium Salt	116804	10 µmol
Adenosine 3',5'-cyclic Monophosphate, 8-(4-Chlorophenylthio)-, Sodium Salt	116812	10 mg
Adenosine 3',5'-cyclic Monophosphate, N ⁶ ,O ^{2'} -Dibutyl-, Sodium Salt	28745	25 mg 100 mg
Adenosine 3',5'-cyclic Monophosphate, N ⁶ ,O ^{2'} -Dioctanoyl-, Sodium Salt	116530	50 mg
Adenosine 3',5'-cyclic Monophosphate, 8-Hydroxy-, Sodium Salt	116823	5 µmol
Adenosine 3',5'-cyclic Monophosphate, N ⁶ -Monobutyl-, Sodium Salt	116808	100 µmol
Adenosine 3',5'-cyclic Monophosphate, N ⁶ -Mono- <i>t</i> -butylcarbamoyl-, Sodium Salt	116827	5 µmol
Adenosine-3',5'-cyclic Monophosphate, 8-[[2-[(7-Nitro-4-benzofurazanyl)amino]ethyl]thio]-, Sodium Salt	116828	5 µmol
Adenosine 3',5'-cyclic Monophosphate, 8-Piperidino-, Sodium Salt	116829	10 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, Sp-Isomer, Triethylammonium Salt	116815***	10 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, Acetoxymethyl Ester, Sp-Isomer	116807***	1 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 8-Bromo-, Sp-Isomer, Sodium Salt	116818***	5 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 8-Chloro-, Sp-Isomer, Sodium Salt	116821***	5 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 8-(4-Chlorophenylthio)-, Sp-Isomer, Sodium Salt	116822***	5 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 8-Hydroxy-, Sp-Isomer, Sodium Salt	116824***	5 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 2'-O-Monobutyl-, Sp-Isomer, Sodium Salt	116826***	5 µmol
Adenosine 3',5'-cyclic Monophosphorothioate, 8-Piperidino-, Sp-Isomer, Sodium Salt	116832***	5 µmol
Caged cAMP	116810	5 mg
5,6-Dichloro-1-β-D-ribofuranosylbenzimidazole 3',5'-cyclic Monophosphate, Sodium Salt	287892	10 µmol
5,6-Dichloro-1-β-D-ribofuranosylbenzimidazole, 3',5'-cyclic Monophosphorothioate, Sp-Isomer, Sodium Salt	287893***	5 µmol

Protein Kinase C (PKC) Activators

Product	Cat. No.	Size
ADMB	171720	1 mg
Bryostatin 1	203811	10 µg
Bryostatin 2	203812	10 µg
DHI	265650	1 mg
1,2-Dioctanoyl- <i>sn</i> -glycerol	317505	10 mg 1 set
FTT	344600	10 mg
Gnidimacrin, <i>Stellera chamaejasme</i> L.	364250	5 µg
(-)-Indolactam V	405272	1 mg
Iripallidal, <i>Iris pallida</i>	412500	1 mg 5 mg
Lipoxin A4	437720	25 µg
Lyngbyatoxin A, <i>Micromonospora</i> sp.	440230	50 µg
Oleic Acid	4954	1 g
1-Oleoyl-2-acetyl- <i>sn</i> -glycerol	495414	5 mg 25 mg 1 set
4α-Phorbol	524382	5 mg
Phorbol-12,13-dibutyrate	524390	1 mg 5 mg
Phorbol-12,13-didecanoate	524392	5 mg
4α-Phorbol-12,13-didecanoate	524394	1 mg 5 mg
Phorbol-12-myristate-13-acetate	524400	1 mg 5 mg 10 mg 25 mg
L-α-Phosphatidylinositol-3,4-bisphosphate, Dipalmitoyl-, Pentaammonium Salt	524613	100 µg
L-α-Phosphatidylinositol-4,5-bisphosphate, Dipalmitoyl-, Pentaammonium Salt	524614	100 µg
L-α-Phosphatidylinositol-3,4,5-trisphosphate, Dipalmitoyl-, Heptaammonium Salt	524615	100 µg
1-Stearoyl-2-arachidonoyl- <i>sn</i> -glycerol	569399	10 mg
4-O-Tetradecanoyl-2,3-dideoxy-L-glucono-1,5-lactone	583720	1 mg
Thymeleatoxin, <i>Thymelea hirsuta</i> L.	605950	300 µg

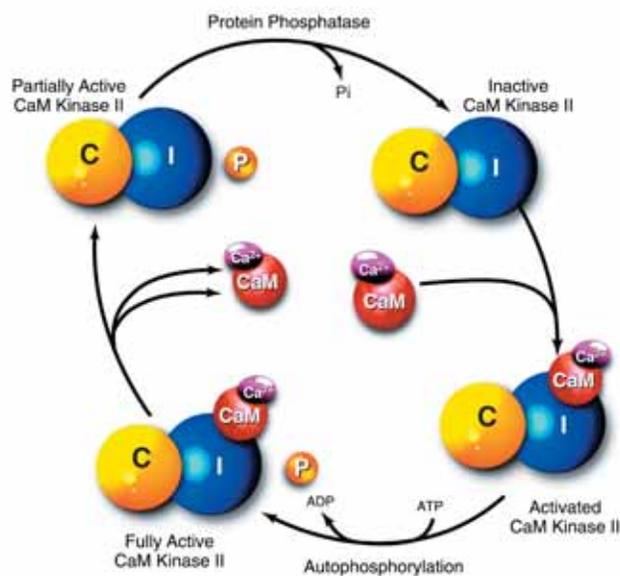
Protein Kinase G (PKG) Activators

Product	Cat. No.	Size
Caged cGMP	370657	5 mg
Guanosine 3',5'-cyclic Monophosphate, Acetoxymethyl Ester	370669	1 µmol
Guanosine 3',5'-cyclic Monophosphate, Sodium Salt	370656	50 mg
Guanosine-3',5'-cyclic Monophosphate, 8-(2-Aminophenylthio)-, Sodium Salt	370662	5 µmol
Guanosine 3',5'-cyclic Monophosphate, 8-Bromo-, Sodium Salt	203820	25 mg
Guanosine 3',5'-cyclic Monophosphate, 8-Bromo-, Acetoxymethyl Ester	370672	1 µmol

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Calmodulin (CaM) Kinase Inhibitors

Many intracellular effects of Ca^{2+} are mediated by Ca^{2+} /calmodulin-dependent protein kinases (CaM kinases). CaM Kinase II, one of the best studied multifunctional enzymes, is found in high concentrations in neuronal synapses. In some regions of the brain, it may constitute up to 2% of the total protein content. Activation of CaM Kinase II has been linked to memory and learning processes in the vertebrate nervous system. CaM Kinase II is a complex of about 12 subunits that exists in four differentially-expressed forms (α , β , γ , and δ). In the inactive state there is a strong interaction between the inhibitory and catalytic domains of the enzyme. The binding of Ca^{2+} /calmodulin allows the catalytic domain to phosphorylate the inhibitory domain. Once activated, CaM Kinase II retains significant activity even after the withdrawal of Ca^{2+} , thereby prolonging the duration of kinase activity. This is attributed to the ability of the enzyme to remain phosphorylated in the absence of Ca^{2+} .



Protein Kinase G (PKG) Activators, cont.

Product	Cat. No.	Size
Guanosine-3',5'-cyclic Monophosphate, 8-(4-Chlorophenylthio)-, Triethylammonium Salt	370665	25 μmol
Guanosine 3',5'-cyclic Monophosphate, N ² ,2'-O-Dibutyl-, Sodium Salt	370660	10 mg
Guanosine-3',5'-cyclic Monophosphate, 8-[[2-[(7-Nitro-4-benzofuranzanyl)-amino]ethyl]thio]-, Sodium Salt	370663	5 μmol
Guanosine 3',5'-cyclic Monophosphate, β -Phenyl-1,N ² -etheno-8-bromo-, Sodium Salt	370664	10 μmol
Guanosine 3',5'-cyclic Monophosphorothioate, Sp-Isomer, Triethylammonium Salt	370667***	5 μmol
Guanosine 3',5'-cyclic Monophosphorothioate, 8-Bromo-, Sp-Isomer, Sodium Salt	370671***	10 μmol
Guanosine 3',5'-cyclic Monophosphorothioate, 8-(4-Chlorophenylthio)-, Sp-Isomer, Triethylammonium Salt	370678***	5 μmol
Guanosine 3',5'-cyclic Monophosphorothioate, β -Phenyl-1,N ² -etheno-8-bromo-, Sp-Isomer, Sodium Salt	370680***	5 μmol

Stress-Activated Protein Kinase (SAPK) Activators

Anisomycin, <i>Streptomyces griseolus</i>	176880	10 mg
D-erythro-Sphingosine, N-Acetyl-	110145	5 mg
Tumor Necrosis Factor- α , Human, Recomb., <i>E. coli</i>	654205	10 μg

Insulin Receptor Kinase (IRK) Activators

Product	Cat. No.	Size
bpV(bipy)	203694	5 mg
bpV(HOpic)	203701	5 mg
bpV(phen)	203695	10 mg
bpV(pic)	203705	5 mg
IRTK Activator	420295	5 mg
IRTK Activator, Negative Control	420296	5 mg
mpV(pic)	475950	10 mg

Inhibitors

Protein Kinase Inhibitor Sets

Cyclin-Dependent Protein Kinase Inhibitor Set	219428	1 set
MAP Kinase Inhibitor Set I	444180	1 set
MAP Kinase Inhibitor Set II	444190	1 set
Protein Kinase Inhibitor Set	476490	1 set
Serine/Threonine Kinase Inhibitor Set	539572	1 set
Src Family Protein Tyrosine Kinase Inhibitor Set	567816	1 set
Tyrosine Kinase Inhibitor Set II	657021	1 set

Calmodulin (CaM) Kinase Inhibitors

Autocamtide-2 Related Inhibitory Peptide, Myristoylated	189482	500 μg
Autocamtide-2 Related Inhibitory Peptide II	189484	1 mg

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Protein Kinases & Related Products

Calmodulin (CaM) Kinase Inhibitors, cont.

Product	Cat. No.	Size
Autocamtide-2 Related Inhibitory Peptide II, Cell-Permeable	189485	1 mg
Calmodulin Kinase II α Antisense Oligonucleotide, Sodium Salt	208917	50 nmol
Calmodulin Kinase II α Antisense Oligonucleotide, Fluorescein-Labeled, Sodium Salt	208919	10 nmol
Calmodulin Kinase II α Antisense Oligonucleotide, Negative Control Sodium Salt	208918	50 nmol
Ca ²⁺ /Calmodulin Kinase II Inhibitor 281-309	208711	500 μ g
[Ala ²⁸⁶]-Ca ²⁺ /Calmodulin Kinase II Inhibitor 281-301	208710	500 μ g
Calmodulin Kinase IINtide	208920	1 mg
Calmodulin Kinase IINtide, Myristoylated	208921	1 mg
Calmodulin Binding Domain	208734	1 mg
H-89, Dihydrochloride*	371963	1 mg
HA 1004, Dihydrochloride*	371964	1 mg
HA 1077, Dihydrochloride	371970	1 mg
K-252a, <i>Nocardioopsis</i> sp.	420298	100 μ g
K-252a, <i>Nocardioopsis</i> sp. in Solution	420297	100 μ g
KN-62*	422706	1 mg
KN-93	422708	1 mg 5 mg
KN-93 in Solution	422712	1 mg
KN-93, Water-Soluble	422711	1 mg
Lavendustin C	234450	1 mg
STO-609	570250	5 mg

Casein Kinase Inhibitors

A3, Hydrochloride	100122	10 mg
Casein Kinase II Inhibitor	218697	10 mg
5,6-Dichloro-1- β -D-ribofuranosyl-benzimidazole	287891	50 mg
H-89, Dihydrochloride*	371963	1 mg
Hymenialdisine, <i>Stylissa damicornis</i>	400085	500 μ g
Hypericin	400076	1 mg
IC261	400090	5 mg

Checkpoint Kinase I (Chk1) Inhibitors

SB-218078	559402	1 mg
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Cyclin-Dependent Kinase (Cdk) Inhibitors

Aloisine A	128125	5 mg
Aloisine, RP106	128135	5 mg
Alsterpaullone	126870	1 mg

Product	Cat. No.	Size
Bohemine	203600	1 mg 5 mg
Cdk Inhibitor, p35	219457	1 mg
Cdk1 Inhibitor	217695	5 mg
Cdk1 Inhibitor, CGP74514A	217696 Ω	5 mg
Cdk1 Inhibitor III	217697	1 mg 5 mg
Cdk1/5 Inhibitor	217720	5 mg
Cdk2 Inhibitor I	219442	1 mg
Cdk2 Inhibitor II	219445	1 mg 5 mg
Cdk2 Inhibitor III	238803 Σ	1 mg
Cdk2/5 Inhibitor	219448	5 mg
Cdk2/Cyclin Inhibitory Peptide I	238801	500 μ g
Cdk2/Cyclin Inhibitory Peptide II	238802	500 μ g
Compound 52	234503 Σ	1 mg
Cucurbitacin I, <i>Cucumis sativus</i> L.	238590	1 mg
Cyclin-Dependent Protein Kinase Inhibitor Set	219428	1 set
Fascaplysin, Synthetic	341251	1 mg
Gnidimacrin, <i>Stellera chamaejasme</i> L.	364250	5 μ g
Hymenialdisine, <i>Stylissa damicornis</i>	400085	500 μ g
Indirubin-3'-monoxime, 5-Iodo-	402086	1 mg
Indirubin-3'-monoxime	402085	1 mg
Indirubin-3'-monoxime-5-sulphonic Acid	402088	1 mg
Kenpaullone	422000	1 mg
Olomoucine	495620	1 mg 5 mg
Olomoucine, Iso-	495622	1 mg 5 mg
Olomoucine, N ⁹ -Isopropyl-	495623	5 mg
Protein Kinase Inhibitor, DMAP	476493	50 mg
Purvalanol A	540500 Σ	1 mg
Roscovitine	557360	1 mg 5 mg
Roscovitine, Immobilized	557361	1 set
Roscovitine, (S)-Isomer	557362	1 mg
SU9516	572650	5 mg
WHI-P180	681500	500 μ g 1 mg

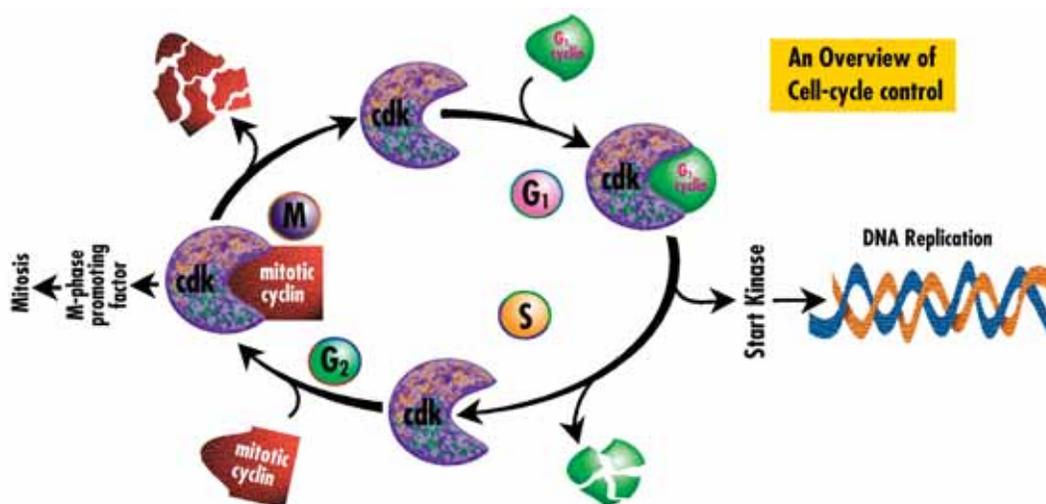
GSK-3 Inhibitors

Aloisine A	128125	5 mg
FRATtide	344265	500 μ g
GSK-3 Inhibitor II	361541	5 mg
GSK-3 β Inhibitor I	361540	5 mg
GSK-3 β Inhibitor III	361542	1 mg

*Not for sale in Japan; Σ Sold under license of U. S. Patents 6,255,485 and 6,617,331; Ω Sold under license of International Patent Application No. W097/16,452 issued to Novartis Pharmaceuticals AG

Protein Kinases & Related Products

Cyclin-Dependent Kinase Inhibitors



Sequential activation of different cdks controls the onset of S phase and mitosis and ensures the existence of only one S phase per cell cycle. Different cdk subunit complexes act at various points in the cell cycle, including G₁/S and G₂/M transitions. During cell cycle, levels of catalytic subunit (cdk) of the complex remain relatively constant, however, the activating cyclin levels change. Cyclins bind and activate cdks and are then destroyed. Cdks are negatively regulated by phosphorylation and by the action of cyclin kinase inhibitors (CKI, such as p21^{WAF1}). Cancer cells are reported to either overexpress cyclins or show mutations in CKI that result in failure in feedback controls at cell-cycle check points.

GSK-3 Inhibitors, cont.

Product	Cat. No.	Size
GSK-3β Peptide Inhibitor	361545	1 mg
GSK-3β Peptide Inhibitor, Cell-permeable	361546	1 mg
GSK-3β Inhibitor I	361540	5 mg
Hymenialdisine, <i>Stylissa damicornis</i>	400085	500 μg

JNK Inhibitors

Aloisine A	128125	5 mg
Dicoumarol	287897	500 mg
JNK Inhibitor I, (L)-Form, Cell-Permeable	420116 ⁹	1 mg
JNK Inhibitor I, (L)-Form, Cell-Permeable, Negative Control	420118	1 mg
JNK Inhibitor II	420119	5 mg
JNK Inhibitor II, Negative Control	420123	1 mg
JNK Inhibitor III, Cell-Permeable	420130	1 mg
JNK Inhibitor III, Cell-Permeable, Negative Control	420131	1 mg
Protein Kinase Inhibitor, DMAP	476493	50 mg

MAP Kinase / MAP Kinase Kinase (MEK) Inhibitors

AG 126	658452	5 mg
Anthrax Lethal Factor, Recombinant, <i>Bacillus anthracis</i>	176900	100 μg
Apigenin	178278	5 mg

Product	Cat. No.	Size
ERK Activation Inhibitor Peptide I, Cell-Permeable	328000	1 mg
ERK Activation Inhibitor Peptide II, Cell-Permeable	328005	1 mg
Hsp25 Kinase Inhibitor	385880	1 mg
Hymenialdisine, <i>Stylissa damicornis</i>	400085	500 μg
5-Iodotubercidin	407900	1 mg
MAP Kinase Antisense Oligonucleotide	454858	25 nmol
MAP Kinase Antisense Oligonucleotide, Negative Control	454859	25 nmol
MAP Kinase Cascade Inhibitor Set	444185	1 set
MAP Kinase Inhibitor Set I	444180	1 set
MAP Kinase Inhibitor Set II	444190	1 set
MEK Inhibitor Set	453710	1 set
MEK1/2 Inhibitor	444939	1 mg 5 mg
ML 3163	475800 [∞]	1 mg
Olomoucine	495620	1 mg 5 mg
Olomoucine, Iso-	495622	1 mg 5 mg
Olomoucine, N ⁹ -Isopropyl-	495623	5 mg
p38 MAP Kinase Inhibitor	506126	500 μg
p38 MAP Kinase Inhibitor III	506121	1 mg
PD 98059	513000	5 mg

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Protein Kinases & Related Products

MAP Kinase ... MEK Inhibitors, cont.

Product	Cat. No.	Size
PD 98059 in Solution	513001	1 ml
PD 169316	513030	1 mg
Raf1 Kinase Inhibitor I	553008	1 mg
SB 202190	559388	1 mg
SB 202190 in Solution	559397	1 ml
SB 202190, Immobilized	559403	1 set
SB 202190, Hydrochloride	559393	1 mg
SB 202474	559387	1 mg
SB 202474, Dihydrochloride	559407	1 mg
SB 203580	559389	1 mg
SB 203580 in Solution	559398	1 ml
SB 203580, Hydrochloride	559395	1 mg
SB 203580, Sulfone	559399	1 mg
SB 203580, Iodo-	559400	1 mg
SB 220025	559396	500 µg
SB 239063	559404	500 µg
SC68376	565625	1 mg
SKF-86002	567305	5 mg
U0124	662006	1 mg
U0125	662008	1 mg
U0126	662005	1 mg
ZM 336372	692000	1 mg

Myosin Light Chain Kinase (MLCK) Inhibitors

A3, Hydrochloride	100122	10 mg
K-252a, <i>Nocardiaopsis</i> sp.	420298	100 µg
K-252b, <i>Nocardiaopsis</i> sp.	420319	50 µg 100 µg
ML-7, Hydrochloride	475880	1 mg
ML-9, Hydrochloride	475882	1 mg
Myosin Light Chain Kinase Inhibitor Peptide 18	475981	5 mg
Myosin Light Chain Kinase Inhibitor Peptide 480-501	05-23-1700	500 µg 1 mg
Piceatannol	527948	1 mg
Staurosporine, <i>Streptomyces</i> sp.	569397	100 µg 250 µg

Protein Kinase A (PKA) Inhibitors

A3, Hydrochloride	100122	10 mg
Adenosine 3',5'-cyclic Monophosphothioate, Rp-Isomer, Triethylammonium Salt	116814***	5 µmol
Adenosine 3',5'-cyclic Monophosphothioate, 8-Bromo-, Rp-Isomer, Sodium Salt	116816***	5 µmol
Adenosine 3',5'-cyclic Monophosphothioate, 8-Bromo-2'-monobutryl-, Rp-Isomer, Sodium Salt	116813***	5 µmol

Product	Cat. No.	Size
Adenosine 3',5'-cyclic Monophosphothioate, 8-Chloro-, Rp-Isomer, Sodium Salt	116819***	5 µmol
Adenosine 3',5'-cyclic Monophosphothioate, 2'-O-Monobutryl-, Rp-Isomer, Sodium Salt	116825***	5 µmol
4-Cyano-3-methylisoquinoline	238900	1 mg
Daphnetin	268295	10 mg
Ellagic Acid, Dihydrate	324683	500 mg
H-7, Dihydrochloride*	371955	1 mg 5 mg
H-8, Dihydrochloride*	371958	1 mg 5 mg
H-9, Dihydrochloride*	371961	1 mg
H-9, Immobilized	371966	1 set
H-89, Dihydrochloride*	371963	1 mg
H-89, Dihydrochloride in Solution*	371962	1 mg
HA 1004, Dihydrochloride*	371964	1 mg
HA 1077, Dihydrochloride	371970	1 mg
K-252a, <i>Nocardiaopsis</i> sp.	420298	100 µg
K-252b, <i>Nocardiaopsis</i> sp.	420319	50 µg 100 µg
KT5720	420320	50 µg 100 µg
KT5720 in Solution	420323	50 µg
NL-71-101	487940	1 mg
Piceatannol	527948	1 mg
Protein Kinase A Heat Stable Inhibitor, Isoform α, Rabbit, Recomb., <i>E. coli</i>	539488	250 U
Protein Kinase A Inhibitor 5-24	116805	500 µg
Protein Kinase A Inhibitor 6-22 Amide	539684	1 mg
Protein Kinase A Inhibitor 14-22 Amide, Cell-Permeable, Myristoylated	476485	500 µg
Staurosporine, <i>Streptomyces</i> sp.	569397	100 µg 250 µg
Staurosporine, <i>Streptomyces</i> sp. in Solution	569396	100 µg
TX-1123	655200	10 mg
TX-1918	655203	10 mg

Akt (Protein Kinase B) Inhibitors

AKT Inhibitor	124005	1 mg
AKT Inhibitor II	124008	1 mg
AKT Inhibitor III	124009	1 mg
LY 294002	440202	5 mg
NL-71-101	487940	1 mg

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Protein Kinases & Related Products

Protein Kinase C (PKC) Inhibitors

Product	Cat. No.	Size
Bisindolylmaleimide I	203290 ⁺	250 µg 1 mg
Bisindolylmaleimide I in Solution	203293 ⁺	1 ml
Bisindolylmaleimide I, Hydrochloride	203291 ⁺	250 µg 1 mg
Bisindolylmaleimide II	203292 ⁺	1 mg
Bisindolylmaleimide III, Hydrochloride	203294 ⁺	250 µg 1 mg
Bisindolylmaleimide IV	203297	250 µg 1 mg
Bisindolylmaleimide V	203303	250 µg 1 mg
Bisindolylmaleimide Inhibitor Set	203305	1 set
Calphostin C, <i>Cladosporium cladosporioides</i>	208725	50 µg 100 µg
Cardiotoxin, <i>Naja nigricollis</i> **	217504	1 mg
Chelerythrine Chloride	220285	5 mg
Dequalinium Chloride	263225	500 mg
Ellagic Acid, Dihydrate	324683	500 mg
ET-18-OCH ₃	341207	5 mg
Gö 6976	365250 ⁺⁺	500 µg
Gö 6976 in Solution	365253 ⁺⁺	1 ml
Gö 6983	365251	500 µg
Gö 7874, Hydrochloride	365252	500 µg
H-7, Dihydrochloride*	371955	1 mg 5 mg
H-8, Dihydrochloride*	371958	1 mg 5 mg
HBDDE	372770	1 mg
1-O-Hexadecyl-2-O-methyl- <i>rac</i> -glycerol	430240	250 mg
Hispidin	377980	2 mg
Hypericin	400076	1 mg
Iso-H-7, Dihydrochloride	371956	1 mg
K-252a, <i>Nocardiosis</i> sp.	420298	100 µg
K-252b, <i>Nocardiosis</i> sp.	420319	50 µg 100 µg
K-252c	420305	1 mg
Melittin	444605	250 µg
NGIC-I	481500	500 µg
(±)-Palmitoylecarnitine Chloride	506385	50 mg
Phloretin	524488	200 mg
Piceatannol	527948	1 mg
Polymyxin B Sulfate	5291	500 mg 1 g 5 g
Protein Kinase C Inhibitor, EGF-R Fragment 651-658, Myristoylated	476475	500 µg
Protein Kinase C Inhibitor 20-28, Cell-Permeable, Myristoylated	476480	500 µg
Protein Kinase C Inhibitor Peptide 19-31	05-23-4904	1 mg 5 mg

Product	Cat. No.	Size
Protein Kinase C Inhibitor Peptide 19-36	539560	500 µg 1 mg
Protein Kinase C Inhibitor Set	539573	1 set
Protein Kinase C _β C2-4 Inhibitor	539561	1 mg
Protein Kinase C _ε Translocation Inhibitor Peptide	539522 ⁺⁺⁺	5 mg
Protein Kinase C _ε Translocation Inhibitor Peptide, Negative Control	539542	5 mg
Protein Kinase C _η Pseudosubstrate Inhibitor	539602	500 µg
Protein Kinase C _η Pseudosubstrate Inhibitor, Myristoylated	539604	500 µg
Protein Kinase C _θ Pseudosubstrate Inhibitor	539634	500 µg
Protein Kinase C _θ Pseudosubstrate Inhibitor, Myristoylated	539636	500 µg
Protein Kinase C _ζ Pseudosubstrate Inhibitor	539610	500 µg
Protein Kinase C _ζ Pseudosubstrate Inhibitor, Myristoylated	539624	500 µg
Pseudohypericin	539590	1 mg 5 mg
Quercetin, Dihydrate	551600	100 mg
Ro-31-7549	557508	1 mg
Ro 31-7549, Immobilized	557509	1 set
Ro-31-8220	557520	500 µg
Ro-31-8425	557514	1 mg
Ro-32-0432	557525	500 µg 1 mg
Rottlerin	557370	10 mg
Safingol	559300	1 mg
Sangivamycin	559307	1 mg
Serine/Threonine Kinase Inhibitor Set	539572	1 set
D-erythro-Sphingosine, Free Base, Bovine Brain	567725	10 mg
D-erythro-Sphingosine, Free Base, Bovine Brain, High Purity	567726	10 mg
D-erythro-Sphingosine, Dihydro-	300230	10 mg
D-erythro-Sphingosine, N,N-Dimethyl-	310500	5 mg
Staurosporine, <i>Streptomyces</i> sp.	569397	100 µg 250 µg
Tamoxifen Citrate	579000	100 mg
Tamoxifen, 4-Hydroxy-, (Z)-	579002	5 mg
TER14687	581800	10 mg

Protein Kinase G (PKG) Inhibitors

A3, Hydrochloride	100122	10 mg
<i>Drosophila</i> Antennapedia Homeo-Domain (43-58)	287895	1 mg
Guanosine 3',5'-cyclic Monophosphothioate, Rp-Isomer, Triethylammonium Salt	370666 ^{***}	5 µmol
Guanosine 3',5'-cyclic Monophosphothioate, 8-Bromo-, Rp-Isomer, Sodium Salt	370674 ^{***}	5 µmol

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+++ Sold under license of U.S. Patent 5,783,405; *** Sold under license of Patent DE 3,802,865.4 issued to BIOLOG LSI

Protein Kinases & Related Products

Protein Kinase G (PKG) Inhibitors

Product	Cat. No.	Size
Guanosine 3',5'-cyclic Monophosphorothioate, 8-(4-Chlorophenylthio)-, Rp-Isomer, Triethylammonium Salt	370677***	1 µmol
Guanosine 3',5'-cyclic Monophosphorothioate, β-Phenyl-1,N ² -etheno-8-bromo-, Rp-Isomer, Sodium Salt	370679***	1 µmol
H-7, Dihydrochloride*	371955	1 mg 5 mg
H-9, Dihydrochloride*	371961	1 mg
H-9, Immobilized	371966	1 set
H-89, Dihydrochloride*	371963	1 mg
HA 1004, Dihydrochloride*	371964	1 mg
HA 1077, Dihydrochloride	371970	1 mg
K-252a, <i>Nocardiosis</i> sp.	420298	100 µg
K-252b, <i>Nocardiosis</i> sp.	420319	50 µg 100 µg
KT5823	420321	50 µg 100 µg
Protein Kinase G Inhibitor	370654	1 mg
Protein Kinase G Iα Inhibitor, Cell-Permeable	370655	1 mg
Staurosporine, <i>Streptomyces</i> sp.	569397	100 µg 250 µg
TX-1918	655203	10 mg

Protein Tyrosine Kinase (PTK) Inhibitors

17-AAG	100068	500 µg
(+)-Aeropylsinin-1, <i>Aplysina aerophoba</i>	121735	1 mg
AG 9	658390	5 mg
AG 10	658475	5 mg
AG 17	658425	5 mg
AG 18	658395	5 mg
AG 30	121760	5 mg
AG 43	658450	5 mg
AG 82	658400	5 mg
AG 99	658430	5 mg
AG 112	658440	5 mg
AG 126	658452	5 mg
AG 183	658410	5 mg
AG 213	658405	5 mg
AG 370	658454	2 mg
AG 490	658401	5 mg
AG 494	658407	5 mg
AG 527	658402	5 mg
AG 538	658403	5 mg
AG 555	658404	5 mg
AG 556	658415	5 mg
AG 592	658406	5 mg
AG 825	121765	2 mg

Product	Cat. No.	Size
AG 835	658409	5 mg
AG 879	658460	5 mg
AG 957	121761	5 mg
AG 957, Adamantyl Ester	121762	5 mg
AG 1024	121767	1 mg
AG 1288	658510	5 mg
AG 1295	658550	5 mg
AG 1296	658551	5 mg
AG 1387	658520	5 mg
AG 1433	658553	5 mg
AG 1478	658552 ^Δ	5 mg
AG 1478 in Solution	658548	1 mg
AGL 2043	121790	1 mg
Aminogemistein	155100	1 mg
Bis-Tyrphostin	658418	5 mg
BPDQ	203697	1 mg
BPIQ-I	203696	1 mg
BPIQ-II	203704	1 mg
Butein	203987	5 mg
CL-387,785	233100	1 mg
Compound 56	234505	500 µg
Curcumin, <i>Curcuma longa</i> L.	239802	100 mg
Daidzein	251600	25 mg
Damnacanthal	251650	1 mg
Daphnetin	268295	10 mg
5'-Deoxy-5'-methylthioadenosine	260585	50 mg
DMBI	317200	10 mg
Emodin	324694	50 mg
Erbstatin Analog	324930	1 mg
Geldanamycin, <i>Streptomyces hygroscopicus</i>	345805	100 µg
Genistein	345834	20 mg 50 mg
Genistin	345836	5 mg
Herbimycin A, <i>Streptomyces</i> sp.	375670	100 µg
HNMPA-(AM) ₃	397100	5 mg
Honokiol	384620	10 mg
I-OMe-AG 538	658417	5 mg
JAK Inhibitor I	420099	500 µg
JAK3 Inhibitor I	420101 ^{∇∇}	5 mg
JAK3 Inhibitor II	420104 ^{∇∇}	5 mg
JAK3 Inhibitor III	420106 ^{∇∇}	500 µg 1 mg
JAK3 Inhibitor IV	420121	10 mg
JAK3 Inhibitor V	420122	10 mg
JAK3 Inhibitor, Negative Control	420112	500 µg 1 mg
K-252a, <i>Nocardiosis</i> sp.	420298	100 µg

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Protein Kinases & Related Products

Protein Tyrosine Kinase (PTK) Inhibitors, cont.

Product	Cat. No.	Size
Lavendustin A	428150	1 mg
Lavendustin B	428160	1 mg
Lavendustin C Methyl Ester	234455	1 mg
LFM-A11	435301	500 µg 1 mg
LFM-A12	435302	500 µg 1 mg
LFM-A13	435300 ¹	5 mg
Oxindole I	499600	10 mg
PD 153035	234490	1 mg
PD 156273	513032	1 mg
PD 158780	513035	500 µg
PD 168393	513033	1 mg
PD 174265	513040	1 mg
PDGF Receptor Tyrosine Kinase Inhibitor I	521230	1 mg
PDGF Receptor Tyrosine Kinase Inhibitor II	521231	1 mg
Piceatannol	527948	1 mg
PP1 Analog**	529579	1 mg
PP2	529573	1 mg
PP2 in Solution	529576	1 mg
PP3	529574	1 mg
Psi-tectorigenin	540100	500 µg
Quercetin, Dihydrate	551600	100 mg
Radicicol, <i>Diheterospora chlamydosporia</i>	553400	500 µg
RG-13022	554725	5 mg
Src Family Protein Tyrosine Kinase Inhibitor Set	567816	1 set
Src Kinase Inhibitor I	567805	1 mg
ST638	567790	5 mg
SU1498	572888	5 mg
SU4984**	572625	1 mg
SU5402**	572630	500 µg 1 mg
SU5614**	572632	1 mg
SU6656	572635	1 mg
(-)-Terreic Acid, Synthetic	581810	2 mg
2'-Thioadenosine	589400	2 mg
TX-1123	655200	10 mg
TX-1918	655203	10 mg
Tyrosine Kinase Inhibitor Set II	657021	1 set
Tyrosine-Specific Protein Kinase Inhibitor	657015	500 µg
Tyrphostin Inhibitor Set I	658420	1 set
VEGFR Tyrosine Kinase Inhibitor	676475	1 mg
VEGF Receptor 2 Kinase Inhibitor I	676480	1 mg
VEGF Receptor 2 Kinase Inhibitor II	676485	1 mg
VEGF Receptor 2 Kinase Inhibitor III	676487	1 mg
VEGF Receptor 2 Kinase Inhibitor IV	676489	1 mg

Product	Cat. No.	Size
VEGF Receptor 3 Kinase Inhibitor, MAZ51	676492	10 mg
WHI-P97	420106	500 µg 1 mg
WHI-P131	420101	5 mg
WHI-P154	420104	5 mg
WHI-P258	420112	500 µg 1 mg

Raf Kinase Inhibitors

Raf1 Kinase Inhibitor I	553008	1 mg
Raf1 Kinase Inhibitor II	553011	1 mg
ZM 336372	692000	1 mg

Rho Kinase Inhibitors

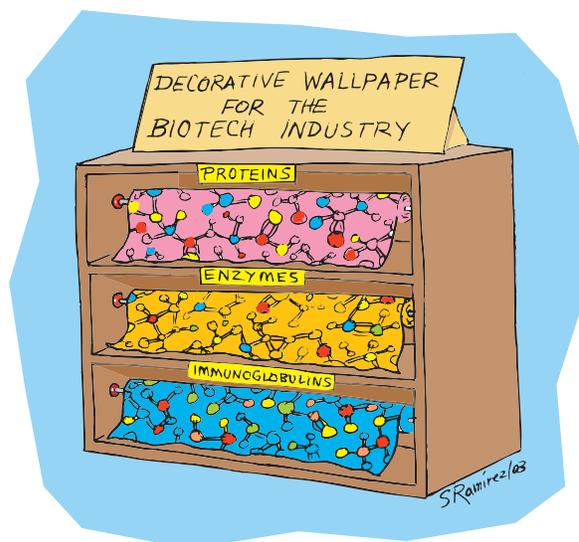
HA 1077, Dihydrochloride	371970	1 mg
Rho-Kinase Inhibitor	555550	1 mg
Y-27632	688000 ²	1 mg 5 mg
Y-27632 in Solution	688001 ²	500 µg

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