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Phospho-(Ser) Kinase Substrate Antibody Sampler Kit

1 Kit (4 x 20 microliters)

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-MAPK/CDK Substrates (PXS*P or S*PXR/K) (34B2) Rabbit mAb	2325	20 µl		Rabbit IgG
Phospho-(Ser) Arg-X-Tyr/Phe-X-pSer Motif Antibody	2981	20 µl		Rabbit
Phospho-(Ser) 14-3-3 Binding Motif (4E2) Mouse mAb	9606	20 µl		Mouse IgG1
Phospho-CDK Substrate Motif [(K/H)pSP] MultiMab® Rabbit mAb mix	9477	20 µl		Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 µl		Horse

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Phospho-(Ser) Kinase Substrate Antibody Sampler Kit provides a fast and economical means of evaluating several phospho-Ser kinase substrates. The kit contains enough primary and secondary antibody to perform two Western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Phospho-(Ser) kinases and phosphatases play critical roles in a wide range of biological processes. Each phospho-(Ser) kinase phosphorylates serine within a specific motif. The MAPK and CDK families of serine protein kinases phosphorylate serine followed by proline residue (1-3). The consensus amino acid sequence for CDK substrate is (K/R)(S*)PX(K/R), where X denotes any one of the 20 amino acids and S* is the phosphorylation site (4-6). MAPK phosphorylates substrates with the consensus sequence PX(S*)P. The 14-3-3 proteins are a highly conserved family of proteins involved in the regulation of cell survival, apoptosis, proliferation and checkpoint control (7-11). Binding of 14-3-3 is mediated through phospho-serine-containing proteins (12). Two different phospho-serine containing motifs are found using a degenerate phospho-serine-oriented peptide library technique, RSXS*XP and RXY/FXS*XP (12). Motif 1 (Arg/Lys and Ser at positions -3 and -2, phospho-Ser at position 0, and Pro at position +2) is found in critical regulatory proteins including Bad, cdc25C, FoxO3A, PKC and c-Raf (11, 13). Motif 2 (RXY/FXS*XP) is found in critical regulatory proteins including cdc25A, cdc25B, PKC γ , IRS-1 and BCR (12). Although Phospho-(Ser) Arg-X-Tyr/Phe-X-pSer Motif Antibody binds 14-3-3 binding motif 2 with no requirement for proline in the +2 position, it provides a powerful tool for the discovery and characterization of potential 14-3-3 binding motif 2-containing proteins or other proteins with the RXY/FXS* motif. Antibodies specific to particular kinase substrates are invaluable reagents in determining kinase activity and identifying potential new kinase substrates. CST has developed antibodies that recognize phosphorylated serine within the context of a protein motif that is phosphorylated by MAPK/CDK, CDKs or 14-3-3. As shown by DELFIA or ELISA, each phospho-(Ser) kinase substrate antibody in this sampler kit is specific to its kinase substrate motif.

Background References

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