

p-Ser (16B4): sc-81514

BACKGROUND

Protein kinases catalyze the phosphorylation of serine, threonine or tyrosine residues in target substrates, providing a mechanism of control for myriad cellular signaling pathways. Several families of kinases phosphorylate both serine and threonine residues in target substrates, including the Raf, Rsk, ROCK, PAK, Ak and PKC families of serine/threonine protein kinases. The modification of proteins by phosphorylation can result in three dimensional changes to the structure of the protein and thereby alter its enzymatic activity or its ability to interact with other proteins. Antibodies targeted to phosphoserine may be used for the characterization of proteins with phosphorylated serine residues, and for the elucidation of cellular pathways involving serine phosphorylation.

REFERENCES

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2. Chen, R.H., et al. 1993. Phosphorylation of the c-Fos transrepression domain by mitogen-activated protein kinase and 90 kDa ribosomal S6 kinase. *Proc. Natl. Acad. Sci. USA* 90: 10952-10956.
3. Pages, G., et al. 1994. Constitutive mutant and putative regulatory serine phosphorylation site of mammalian MAP kinase kinase (MEK1). *EMBO J.* 13: 3003-3010.

SOURCE

p-Ser (16B4) is a mouse monoclonal antibody raised against phosphoserine.

PRODUCT

Each vial contains 50 µg IgM kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

APPLICATIONS

p-Ser (16B4) is recommended for detection of a broad range of serine-phosphorylated proteins in crude cell extracts, preferring positively charged amino acids directly neighbored to phosphoserine of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SELECT PRODUCT CITATIONS

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3. Li, H.X., et al. 2010. Krüppel-like factor 4 promotes differentiation by transforming growth factor-beta receptor-mediated Smad and p38 MAPK signaling in vascular smooth muscle cells. *J. Biol. Chem.* 285: 17846-17856.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.