SANTA CRUZ BIOTECHNOLOGY, INC.

p-MEK-1 (Ser 298)-R: sc-30635-R

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A family of protein kinases located upstream of the MAP kinases and responsible for their activation has been identified. The prototype member of this family, designated MAP kinase kinase, or MEK-1, specifically phosphorylates the MAP kinase regulatory threonine and tyrosine residues present in the Thr-Glu-Tyr motif of ERK. A second MEK family member, MEK-2, resembles MEK-1 in its substrate specificity. MEK-3 (or MKK3) functions to activate p38 MAP kinase, and MEK-4 (also called SEK1 or MKK4) activates both p38 and JNK MAP kinases. MEK-5 appears to specifically phosphorylate ERK 5, whereas MEK-6 phosphorylates p38 and p38β. MEK-7 (or MKK7) phosphorylates and activates the JNK signal transduction pathway. Phosphorylation on Ser/Thr by MAP kinase kinase kinases (RAF or MEKK1) positively regulates the kinase activity.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K1 (human) mapping to 15q22.31; Map2k1 (mouse) mapping to 9 C.

SOURCE

p-MEK-1 (Ser 298)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 298 phosphorylated MEK-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30635 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

p-MEK-1 (Ser 298)-R is recommended for detection of Ser 298 phosphorylated MEK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MEK-1 siRNA (h): sc-29396, MEK-1 siRNA (m): sc-35904, MEK-1 shRNA Plasmid (h): sc-29396-SH, MEK-1 shRNA Plasmid (m): sc-35904-SH, MEK-1 shRNA (h) Lentiviral Particles: sc-29396-V and MEK-1 shRNA (m) Lentiviral Particles: sc-35904-V.

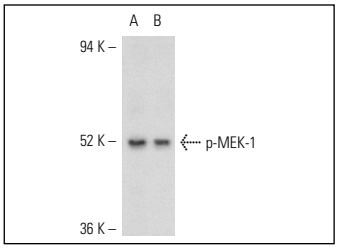
Molecular Weight of p-MEK-1: 45 kDa.

Positive Controls: KNRK + PMA cell lysate: sc-24725.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



p-MEK-1 (Ser 298)-R: sc-30635-R. Western blot analysis of MEK-1 phosphorylation in untreated (**A**) and PMA treated (**B**) KNRK whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bhattacharyya, S., et al. 2008. Smad-independent transforming growth factor-β regulation of early growth response-1 and sustained expression in fibrosis: implications for scleroderma. Am. J. Pathol. 173: 1085-1099.
2. Cheng, C., et al. 2009. Trihydrophobin 1 interacts with PAK1 and regulates ERK/MAPK activation and cell migration. J. Biol. Chem. 284: 8786-8796.
3. Jiao, Q., et al. 2014. Xanthoceraside induces apoptosis in melanoma cells through the activation of caspases and the suppression of the IGF-1R/Raf/MEK/ERK signaling pathway. J. Med. Food. 17: 1070-1078.
4. Basso, F., et al. 2014. Comparison of the effects of PRKAR1A and PRKAR2B depletion on signaling pathways, cell growth, and cell cycle control of adrenocortical cells. Horm. Metab. Res. 46: 883-888.

PROTOCOLS

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