

p-MEK-4 (Ser 80): sc-101794

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 MKK-3) functions to activate p38 MAP kinase, and MEK-4 (also called SEK1 or MKK-4) activates both p38 and JNK MAP kinases. MEK-5 appears to specifically phosphorylate ERK5, whereas MEK-6 phosphorylates p38 and p38 β . MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway.

REFERENCES

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3. Derijard, B., et al. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and MKK isoforms. *Science* 267: 682-685.
4. Zhou, G., et al. 1995. Components of a new human protein kinase signal transduction pathway. *J. Biol. Chem.* 270: 12665-12669.
5. Han, J., et al. 1996. Characterization of the structure and function of a novel MAP kinase kinase (MKK6). *J. Biol. Chem.* 271: 2886-2891.
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7. Tournier, C., et al. 1997. Mitogen-activated protein kinase kinase-7 is an activator of the c-Jun NH₂-terminal kinase. *Proc. Natl. Acad. Sci. USA* 94: 7337-7442.
8. Holland, P.M., et al. 1997. MKK7 is a stress-activated mitogen-activated protein kinase functionally related to hemipterous. *J. Biol. Chem.* 272: 24994-24998.
9. Wu, Z., et al. Molecular cloning and characterization of human JNKK2, a novel Jun NH₂-terminal kinase-specific kinase. *Mol. Cell. Biol.* 17: 7407-7416.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K4 (human) mapping to 17p12; Map2k4 (mouse) mapping to 11 B3.

SOURCE

p-MEK-4 (Ser 80) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 80 of MEK-4 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-MEK-4 (Ser 80) is recommended for detection of Ser 80 phosphorylated MEK-4 of human origin and correspondingly phosphorylated Ser 78 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MEK-4 siRNA (h): sc-35909 and MEK-4 siRNA (m): sc-35910.

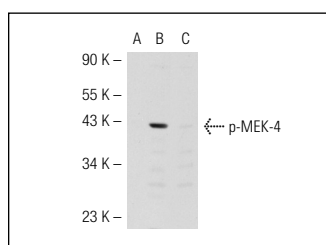
Molecular Weight of p-MEK-4: 45 kDa.

Positive Controls: human breast carcinoma tissue or UV-treated 293 whole cell lysate.

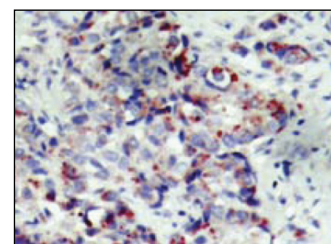
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-MEK-4 (Ser 80): sc-101794. Western blot analysis of MEK-4 phosphorylation in untreated (A), UV irradiated (B) and lambda protein phosphatase (sc-200312A) treated and UV irradiated (C) HEK293 whole cell lysates.



p-MEK-4 (Ser 80): sc-101794. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic and membrane staining.

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.