SANTA CRUZ BIOTECHNOLOGY, INC.

MEK-6 (C-1): sc-166746

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 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 p38β. MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway.

REFERENCES

1. Crews, C.M., et al. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. Science 258: 478-480.
2. Wu, J., et al. 1993. Identification and characterization of a new mammalian mitogen-activated protein kinase kinase, MKK2. Mol. Cell. Biol. 13: 4539-4548.
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 kinse (MKK6). J. Biol. Chem. 271: 2886-2891.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K6 (human) mapping to 17q24.3; Map2k6 (mouse) mapping to 11 E2.

SOURCE

MEK-6 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 275-315 at the C-terminus of MEK-6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MEK-6 (C-1) is available conjugated to agarose (sc-166746 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166746 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166746 PE), fluorescein (sc-166746 FITC), Alexa Fluor® 488 (sc-166746 AF488), Alexa Fluor® 546 (sc-166746 AF546), Alexa Fluor® 594 (sc-166746 AF594) or Alexa Fluor® 647 (sc-166746 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166746 AF680) or Alexa Fluor® 790 (sc-166746 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166746 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MEK-6 (C-1) is recommended for detection of MEK-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

MEK-6 (C-1) is also recommended for detection of MEK-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MEK-6 siRNA (h): sc-35913, MEK-6 siRNA (m): sc-35914, MEK-6 shRNA Plasmid (h): sc-35913-SH, MEK-6 shRNA Plasmid (m): sc-35914-SH, MEK-6 shRNA (h) Lentiviral Particles: sc-35913-V and MEK-6 shRNA (m) Lentiviral Particles: sc-35914-V.

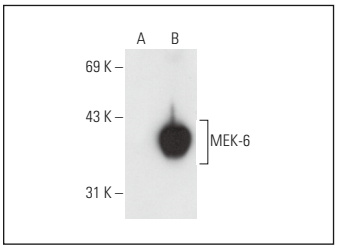
Molecular Weight of MEK-6: 37 kDa.

Positive Controls: MEK-6 (h): 293T Lysate: sc-113820, COLO 320DM cell lysate: sc-2226 or HeLa whole cell lysate: sc-2200.

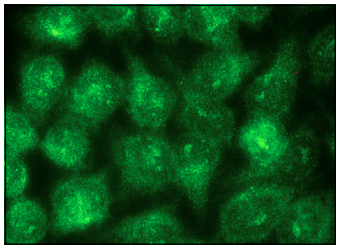
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MEK-6 (C-1): sc-166746. Western blot analysis of MEK-6 expression in non-transfected: sc-117752 (**A**) and human MEK-6 transfected: sc-113820 (**B**) 293T whole cell lysates.



MEK-6 (C-1): sc-166746. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

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.