SANTA CRUZ BIOTECHNOLOGY, INC.

MEK-3/6 (V-20): sc-6073

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 p38b. MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K3 (human) mapping to 17q11.2, MAP2K6 (human) mapping to 17q24.3; Map2k3 (mouse) mapping to 11 B2, Map2k6 (mouse) mapping to 11 E2.

SOURCE

MEK-3/6 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MEK-6 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-6073 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEK-3/6 (V-20) is recommended for detection of MEK-3 and MEK-6 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).

MEK-3/6 (V-20) is also recommended for detection of MEK-3 and MEK-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MEK-3/6 siRNA (h): sc-43924, MEK-3/6 shRNA Plasmid (h): sc-43924-SH and MEK-3/6 shRNA (h) Lentiviral Particles: sc-43924-V.

Molecular Weight of MEK-3/6: 37 kDa.

Positive Controls: MEK-3 (h): 293T Lysate: sc-114954 or Jurkat whole cell lysate: sc-2204.

RESEARCH USE

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

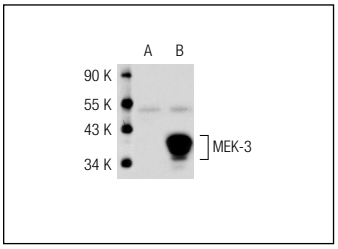
PROTOCOLS

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

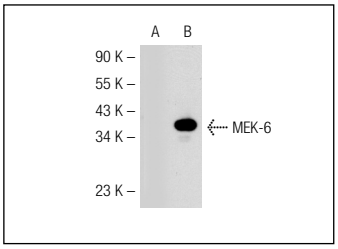
STORAGE

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

DATA



MEK-3/6 (V-20): sc-6073. Western blot analysis of MEK-3 expression in non-transfected: sc-117752 (**A**) and human MEK-3 transfected: sc-114954 (**B**) 293T whole cell lysates.



MEK-3/6 (V-20): sc-6073. 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.

SELECT PRODUCT CITATIONS

1. Dashti, S., et al. 2001. MEK-6 regulates human envolucrin gene expression via a p38α-, and p38δ-dependent mechanism. J. Biol. Chem. 276: 27214-27220.
2. Falsig, J., et al. 2004. Specific modulation of astrocyte inflammation by inhibition of mixed lineage kinases with CEP-1347. J. Immunol. 173: 2762-2770.
3. Efimova, T., et al. 2004. Protein kinase Cδ regulates keratinocyte death and survival by regulating activity and subcellular localization of a p38δ-extracellular signal-regulated kinase 1/2 complex. Mol. Cell. Biol. 24: 8167-8183.
4. Matindale, J.J., et al. 2005. Overexpression of mitogen-activated protein kinase kinase 6 in the heart improves functional recovery from ischemia *in vitro* and protects against myocardial infarction *in vivo*. J. Biol. Chem. 280: 669-676.
5. Sun, P., et al. 2007. PRAK is essential for Ras-induced senescence and tumor suppression. Cell 128: 295-308.
6. Kim, B.M., et al. 2008. Desferrioxamine (DFX) induces apoptosis through the p38-caspase8-Bid-Bax pathway in PHA-stimulated human lymphocytes. Toxicol. Appl. Pharmacol. 228: 24-31.
7. Adhikary, G., et al. 2010. PKC-δ and -η, MEKK-1, MEK-6, MEK-3, and p38-δ are essential mediators of the response of normal human epidermal keratinocytes to differentiating agents. J. Invest. Dermatol. 130: 2017-2030.