SANTA CRUZ BIOTECHNOLOGY, INC.

MEKK 15 (D-6): sc-514606

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. MEKK 15 (MAPK/ERK kinase kinase 15), also known as MAP3K15 (mitogen-activated protein kinase kinase kinase 15), is a 1,313 amino acid protein that contains one protein kinase domain and belongs to the MAP3K subfamily of Ser/Thr protein kinases. Using magnesium as a cofactor, MEKK 15 functions to catalyze the ATP-dependent phosphorylation of target proteins and is thought to act as a component of specific protein kinase signaling cascades. The gene encoding MEKK 15 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES

1. Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. Nature 331: 22.
2. Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
3. Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. Methods Enzymol. 200: 38-62.
4. Hanes, J., von der Kammer, H., Klaudiny, J. and Scheit, K.H. 1994. Characterization by cDNA cloning of two new human protein kinases. Evidence by sequence comparison of a new family of mammalian protein kinases. J. Mol. Biol. 244: 665-672.
5. Dinulos, M.B., Bassi, M.T., Rugarli, E.I., Chapman, V., Ballabio, A. and Disteche, C.M. 1996. A new region of conservation is defined between human and mouse X chromosomes. Genomics 35: 244-247.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K15 (human) mapping to Xp22.12; Map3k15 (mouse) mapping to X F4.

SOURCE

MEKK 15 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 979-996 within an internal region of MEKK 15 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514606 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MEKK 15 (D-6) is recommended for detection of MEKK 15 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).

Suitable for use as control antibody for MEKK 15 siRNA (h): sc-75771, MEKK 15 siRNA (m): sc-75772, MEKK 15 shRNA Plasmid (h): sc-75771-SH, MEKK 15 shRNA Plasmid (m): sc-75772-SH, MEKK 15 shRNA (h) Lentiviral Particles: sc-75771-V and MEKK 15 shRNA (m) Lentiviral Particles: sc-75772-V.

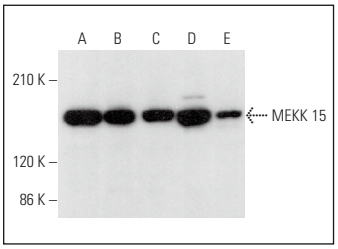
Molecular Weight of MEKK 15: 147 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or SK-N-MC cell lysate: sc-2237.

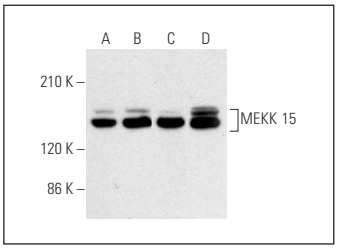
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



MEKK 15 (D-6): sc-514606. Western blot analysis of MEKK 15 expression in HeLa (**A**), ACHN (**B**), K-562 (**C**), c4 (**D**) and NIH/3T3 (**E**) whole cell lysates.



MEKK 15 (D-6): sc-514606. Western blot analysis of MEKK 15 expression in HeLa (**A**), Hep G2 (**B**), SK-N-MC (**C**) and FHs 173We (**D**) whole cell lysates.

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.

PROTOCOLS

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