SANTA CRUZ BIOTECHNOLOGY, INC.

ASK 1 (N-19): sc-6368

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mitogen-activated protein (MAP) kinase cascades are activated by various extracellular stimuli including growth factors. The MEK kinases (also designated MAP kinase kinase kinases, MKKKs, MAP3Ks or MEKKs) phosphorylate and thereby activate the MEKs (also called MAP kinase kinases or MKKs), including ERK, JNK and p38. These activated MEKs in turn phosphorylate and activate the MAP kinases. The MEK kinases include Raf-1, Raf-B, Mos, MEK kinase-1, MEK kinase-2, MEK kinase-3, MEK kinase-4, ASK 1 (MEK kinase-5) and MAP3K6 (MEK kinase-6). MEK kinase-1 has been shown to phosphorylate MEK-1 via a Raf-independent pathway. Evidence suggests that MEK-3 is preferentially activated by MEK kinase-3 and that MEK-4 is activated by both MEK kinase-2 and MEK kinase-3. MEK kinase-4 has been shown to specifically activate the JNK pathway. ASK 1 activates both MEK-4 and MEK-3/MEK-6 pathways.

REFERENCES

1. Lange-Carter, C.A., et al. 1993. A divergence in the MAP kinase regulatory network defined by MEK kinase and Raf. Science 260: 315-319.
2. Guan, K.L. 1994. The mitogen activated protein kinase signal transduction pathway: from the cell surface to the nucleus. Cell. Signal. 6: 581-589.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K5 (human) mapping to 6q23.3; Map3k5 (mouse) mapping to 10 A3.

SOURCE

ASK 1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ASK 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-6368 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ASK 1 (N-19) is recommended for detection of ASK 1 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 ASK 1 siRNA (h): sc-29748, ASK 1 siRNA (m): sc-29749, ASK 1 shRNA Plasmid (h): sc-29748-SH, ASK 1 shRNA Plasmid (m): sc-29749-SH, ASK 1 shRNA (h) Lentiviral Particles: sc-29748-V and ASK 1 shRNA (m) Lentiviral Particles: sc-29749-V.

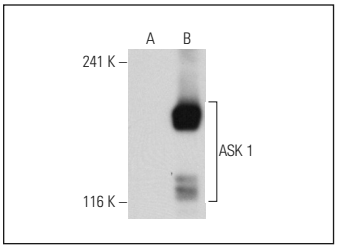
Molecular Weight of ASK 1: 165 kDa.

Positive Controls: ASK 1 (h2): 293T Lysate: sc-116417, HeLa whole cell lysate: sc-2200 or BJAB whole cell lysate: sc-2207.

STORAGE

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

DATA



ASK 1 (N-19): sc-6368. Western blot analysis of ASK 1 expression in non-transfected: sc-117752 (**A**) and human ASK 1 transfected: sc-116417 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Werneburg, B.G., et al. 2001. Molecular characterization of CD40 signaling intermediates. J. Biol. Chem. 276: 43334-43342.
2. Tourneur, L., et al. 2003. Loss of FADD protein expression results in a biased FAS-signaling pathway and correlates with the development of tumoral status in thyroid follicular cells. Oncogene 22: 2795-2804.
3. Galvan, V., et al. 2003. Type 1 Insulin-like growth factor receptor (IGF-IR) signaling inhibits apoptosis signal-regulating kinase 1 (ASK 1). J. Biol. Chem. 278: 13325.
4. Perrin, V., et al. 2009. Implication of the JNK pathway in a rat model of Huntington's disease. Exp. Neurol. 215: 191-200.
5. Zhang, J., et al. 2010. MEKK3 overexpression contributes to the hyperresponsiveness of IL-12-overproducing cells and $CD4^+$ T conventional cells in nonobese diabetic mice. J. Immunol. 185: 3554-3563.
6. Pérez, V.I., et al. 2011. Thioredoxin 1 overexpression extends mainly the earlier part of life span in mice. J. Gerontol. A Biol. Sci. Med. Sci. 66: 1286-1299.
7. Tristan, C.A., et al. 2015. Role of apoptosis signal-regulating kinase 1 (ASK1) as an activator of the GAPDH-siah1 stress-signaling cascade. J. Biol. Chem. 290: 56-64.

RESEARCH USE

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