

p-ASK 1 (Ser 83): sc-101633

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. ASK1 activates both 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.
3. Wang, X.S., et al. 1996. Molecular cloning and characterization of a novel protein kinase with a catalytic domain homologous to mitogen-activated protein kinase kinase kinase. *J. Biol. Chem.* 271: 31607-31611.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K5 (human) mapping to 6q23.3.

SOURCE

p-ASK 1 (Ser 83) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 83 phosphorylated ASK 1 of human origin.

PRODUCT

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

APPLICATIONS

p-ASK 1 (Ser 83) is recommended for detection of Ser 83 phosphorylated ASK 1 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ASK 1 siRNA (h): sc-29748, ASK 1 shRNA Plasmid (h): sc-29748-SH and ASK 1 shRNA (h) Lentiviral Particles: sc-29748-V.

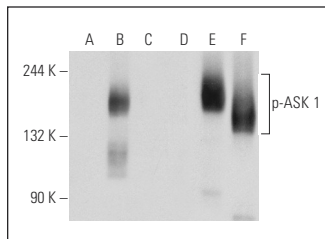
Molecular Weight of p-ASK 1: 165 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or K-562 + TNF α cell lysate: sc-24723.

STORAGE

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

DATA



Western blot analysis of ASK 1 phosphorylation in non-transfected: sc-117752 (A,D), untreated human ASK 1 transfected: sc-116417 (B,E) and lambda protein phosphatase (sc-200312A) treated human ASK 1 transfected: sc-116417 (C,F) 293T whole cell lysates. Antibodies tested include p-ASK 1 (Ser 83): sc-101633 (A,B,C) and ASK 1 (H-300): sc-7931 (D,E,F).

SELECT PRODUCT CITATIONS

1. Reddy, A.B., et al. 2009. Aldose reductase regulates high glucose-induced ectodomain shedding of tumor necrosis factor (TNF)- α via protein kinase C- δ and TNF- α converting enzyme in vascular smooth muscle cells. *Endocrinology* 150: 63-74.
2. Chang, K.C., et al. 2011. Dominant expression of survival signals of endoplasmic reticulum stress response in Hodgkin lymphoma. *Cancer Sci.* 102: 275-281.
3. Selimovic, D., et al. 2011. Apoptosis related protein-1 triggers melanoma cell death via interaction with the juxtamembrane region of p75 neurotrophin receptor. *J. Cell. Mol. Med.* 16: 349-361.
4. Zhang, T.L., et al. 2012. The neuroprotective effect of losartan through inhibiting AT1/ASK1/MKK4/JNK3 pathway following cerebral I/R in rat hippocampal CA1 region. *CNS Neurosci. Ther.* 18: 981-987.
5. Selimovic, D., et al. 2013. Vinblastine-induced apoptosis of melanoma cells is mediated by Ras homologous A protein (Rho A) via mitochondrial and non-mitochondrial-dependent mechanisms. *Apoptosis* 18: 980-997.

RESEARCH USE

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

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Try **p-ASK 1 (B-5): sc-166967**, our highly recommended monoclonal alternative to p-ASK 1 (Ser 83).