

# ASK 1 (H-300): sc-7931

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ASK 1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1076-1375 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.

ASK 1 (H-300) is available conjugated to agarose (sc-7931 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-7931 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

## APPLICATIONS

ASK 1 (H-300) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). ASK 1 (H-300) is also recommended for detection of ASK 1 in additional species, including equine, canine and bovine.

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.

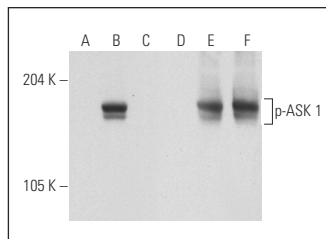
## RESEARCH USE

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

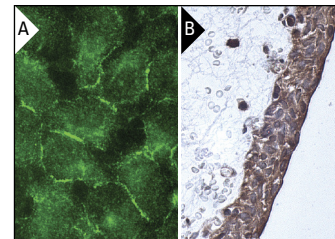
## STORAGE

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).



ASK 1 (H-300): sc-7931. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (B).

## SELECT PRODUCT CITATIONS

- Muslin, A.J., et al. 2000. 14-3-3 proteins block apoptosis and differentially regulate MAPK cascades. *EMBO J.* 19: 349-358.
- Selimovic, D., et al. 2012. 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.
- 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.
- Liu, W.H., et al. 2013. Cross talk between p38MAPK and ERK is mediated through MAPK-mediated protein phosphatase 2A catalytic subunit  $\alpha$  and MAPK phosphatase-1 expression in human leukemia U937 cells. *Cell. Signal.* 25: 1845-1851.
- Yu, Y., et al. 2013. Overexpression of thioredoxin-binding protein 2 increases oxidation sensitivity and apoptosis in human lens epithelial cells. *Free Radic. Biol. Med.* 57: 92-104.
- Pan, J., et al. 2015. Small peptide inhibitor of JNK3 protects dopaminergic neurons from MPTP induced injury via inhibiting the ASK1-JNK3 signaling pathway. *PLoS ONE* 10: e0119204.
- Lauretti, E. and Pratico, D. 2015. Glucose deprivation increases  $\tau$  phosphorylation via P38 mitogen-activated protein kinase. *Aging Cell* 14: 1067-1074.

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Try **ASK 1 (F-9): sc-5294** or **ASK 1 (H-2): sc-390275**, our highly recommended monoclonal alternatives to ASK 1 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **ASK 1 (F-9): sc-5294**.