

p-ASK 1 (B-5): sc-166967

BACKGROUND

Mitogen-activated protein (MAP) kinase cascades are activated by various extracellular stimuli including growth factors. The MEK kinases (also called MAP kinase kinase kinases) phosphorylate and activate the MAP kinases, including ERK, JNK and p38. The MEK kinases characterized to date include Raf-1, Raf-B, MOS, MEK kinase-1, MEK kinase-2, MEK kinase-3, MEK kinase-4 and ASK 1 (also designated MEK kinase-5). 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. ASK 1 serine 83 is phosphorylated by Akt.

CHROMOSOMAL LOCATION

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

SOURCE

p-ASK 1 (B-5) is a mouse monoclonal antibody specific for an epitope containing Ser 83 phosphorylated ASK 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-ASK 1 (B-5) is available conjugated to agarose (sc-166967 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166967 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166967 PE), fluorescein (sc-166967 FITC), Alexa Fluor® 488 (sc-166967 AF488), Alexa Fluor® 546 (sc-166967 AF546), Alexa Fluor® 594 (sc-166967 AF594) or Alexa Fluor® 647 (sc-166967 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166967 AF680) or Alexa Fluor® 790 (sc-166967 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

p-ASK 1 (B-5) is recommended for detection of Ser 83 phosphorylated ASK 1 of 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 ASK 1 siRNA (h): sc-29748, ASK 1 shRNA Plasmid (h): sc-29748-SH and ASK 1 shRNA (h) Lentiviral Particles: sc-29748-V.

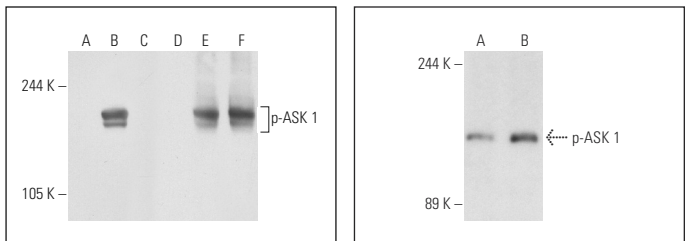
Molecular Weight of p-ASK 1: 165 kDa.

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

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (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



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 (B-5): sc-166967 (A,B,C) and ASK 1 (H-300): sc-7931 (D,E,F).

SELECT PRODUCT CITATIONS

- Yang, W.H., et al. 2011. Epigallocatechin-3-gallate induces cell apoptosis of human chondrosarcoma cells through apoptosis signal-regulating kinase 1 pathway. *J. Cell. Biochem.* 112: 1601-1611.
- Liangpunsakul, S., et al. 2012. Imipramine blocks ethanol-induced ASMAse activation, ceramide generation, and PP2A activation, and ameliorates hepatic steatosis in ethanol-fed mice. *Am. J. Physiol. Gastrointest. Liver Physiol.* 302: G515-G523.
- Sharma, A., et al. 2020. Influenza A virus nucleoprotein activates the JNK stress-signaling pathway for viral replication by sequestering host filament A protein. *Front. Microbiol.* 11: 581867.
- Li, Y., et al. 2021. Combination of curcumin and ginkgolide B inhibits cystogenesis by regulating multiple signaling pathways. *Mol. Med. Rep.* 23: 195.
- Guo, R., et al. 2022. Dietary camellia seed oil attenuates liver injury in mice chronically exposed to alcohol. *Front. Nutr.* 9: 1026740.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA