

# TRAP-1 (C-8): sc-13134

## BACKGROUND

Transforming growth factor  $\beta$  (TGF $\beta$ ) receptor associated binding protein (TRAP-1) participates in the regulation of the TGF $\beta$  signaling pathway. TGF $\beta$  is a secreted ligand that induces transcription of various targeted genes involved in cell proliferation, differentiation and apoptosis by sequentially binding to surface TGF $\beta$  type II receptors and inducing the autophosphorylation of the type II receptor and the transient transactivation of the type I TGF $\beta$  receptor. The signal is then propagated through the Smad family of transcription factors, which leads to the expression of the targeted genes. The cytosolic TRAP-1 protein selectively associates with the phosphorylated type I TGF $\beta$  receptors, but not with the unphosphorylated type I receptors or type II receptors. TRAP-1 binding to the receptor results in the inhibition of TGF $\beta$  signaling, thereby inhibiting the transcription of TGF $\beta$  target genes. The carboxy terminus of TRAP-1 is also able to bind to 5-lipoxygenase, a mediator of lipid metabolism for the production of leukotrienes, where it may then regulate the signaling within leukocytes and other inflammatory mediating cells.

## CHROMOSOMAL LOCATION

Genetic locus: TGFBRAP1 (human) mapping to 2q12.1.

## SOURCE

TRAP-1 (C-8) is a mouse monoclonal antibody raised against amino acids 510-860 at the C-terminus of TRAP-1 (TGF- $\beta$  receptor associated protein-1) of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRAP-1 (C-8) is available conjugated to agarose (sc-13134 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP.

## STORAGE

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

## APPLICATIONS

TRAP-1 (C-8) is recommended for detection of TRAP-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1,000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 TRAP-1 siRNA (h): sc-36720, TRAP-1 shRNA Plasmid (h): sc-36720-SH and TRAP-1 shRNA (h) Lentiviral Particles: sc-36720-V.

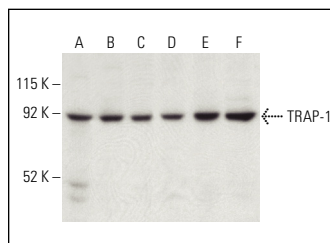
Molecular Weight of TRAP-1: 80 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, Hep G2 cell lysate: sc-2227 or A-673 cell lysate: sc-2414.

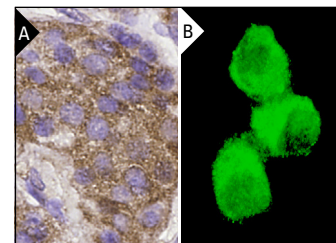
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TRAP-1 (C-8): sc-13134. Western blot analysis of TRAP-1 expression in HL-60 (A), Hep G2 (B), A-673 (C), MIA PaCa-2 (D), RT-4 (E) and HEL 92.1.7 (F) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



TRAP-1 (C-8): sc-13134. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue (A). Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization (B).

## SELECT PRODUCT CITATIONS

- Vasiljevic, N., et al. 2009. The Bcl-x<sub>L</sub> inhibitor of apoptosis is preferentially expressed in cutaneous squamous cell carcinoma compared with that in keratoacanthoma. *Int. J. Cancer* 124: 2361-2366.
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- Sindhwani, A., et al. 2017. *Salmonella* exploits the host endolysosomal tethering factor HOPS complex to promote its intravacuolar replication. *PLoS Pathog.* 13: e1006700.
- Song, C., et al. 2019. Study of the mechanism underlying hsa-miR338-3p downregulation to promote fibrosis of the synovial tissue in osteoarthritis patients. *Mol. Biol. Rep.* 46: 627-637.
- Guo, Q., et al. 2019. Kami-shoyo-san ameliorates sociability deficits in ovariectomized mice, a putative female model of autism spectrum disorder, via facilitating dopamine D<sub>1</sub> and GABA<sub>A</sub> receptor functions. *J. Ethnopharmacol.* 236: 231-239.
- Stanková, P., et al. 2021. Western diet decreases the liver mitochondrial oxidative flux of succinate: insight from a murine NAFLD model. *Int. J. Mol. Sci.* 22: 6908.

## RESEARCH USE

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