

TRAP-1 (N-19): sc-8664

BACKGROUND

Transforming growth factor β (TGF β) receptor associated binding protein (TRAP-1) participates in the regulation of the TGF β signaling pathway. TGF β is a secreted ligand that induces transcription of various targeted genes involved in cell proliferation, differentiation and apoptosis by sequentially binding to surface TGF β type II receptors and inducing the autophosphorylation of the type II receptor and the transient transactivation of the type I TGF β 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 β 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 β signaling, thereby inhibiting the transcription of TGF β 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.

REFERENCES

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2. Heldin, C.H., Miyazono, K. and ten Dijke, P. 1997. TGF- β signalling from cell membrane to nucleus through SMAD proteins. *Nature* 390: 465-471.
3. Nakao, A., Imamura, T., Souchelnyskiy, S., Kawabata, M., Ishisaki, A., Oeda, E., Tamaki, K., Hanai, J., Heldin, C.H., Miyazono, K. and ten Dijke, P. 1997. TGF- β receptor-mediated signalling through SMAD2, SMAD3 and SMAD4. *EMBO J.* 16: 5353-5362.
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5. Datta, P.K., Chytil, A., Gorska, A.E. and Moses, H.L. 1998. Identification of STRAP, a novel WD domain protein in transforming growth factor-signaling. *J. Biol. Chem.* 273: 34671-34674.

CHROMOSOMAL LOCATION

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

SOURCE

TRAP-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TRAP-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8664 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TRAP-1 (N-19) is recommended for detection of TRAP-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

TRAP-1 (N-19) is also recommended for detection of TRAP-1 in additional species, including equine.

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.

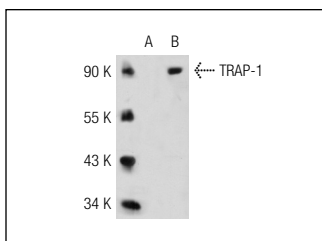
Molecular Weight of TRAP-1: 80 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Hep G2 cell lysate: sc-2227 or TRAP-1 (h): 293T Lysate: sc-113423.

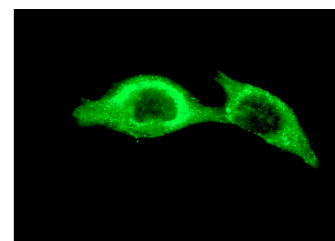
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



TRAP-1 (N-19): sc-8664. Western blot analysis of TRAP-1 expression in non-transfected: sc-117752 (A) and human TRAP-1 transfected: sc-113423 (B) 293T whole cell lysates.



TRAP-1 (N-19): sc-8664. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

RESEARCH USE

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

MONOS
Satisfaction
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Try **TRAP-1 (C-8): sc-13134**, our highly recommended monoclonal alternative to TRAP-1 (N-19).