

STRAP (V-14): sc-14554

BACKGROUND

Smad proteins play an important role in the intracellular signalling of the TGF β superfamily of extracellular polypeptides. Two Smad proteins, Smad6 and Smad7, function as antagonists to TGF β signalling. STRAP, another antagonist to the TGF β signalling pathway, specifically interacts with Smad7, but not Smad6, to synergistically block TGF β -induced transcriptional activation. The gene encoding the human homolog of STRAP (as designated in mouse), called unr-interacting protein, maps to chromosome 12p12.3. Unr-interacting protein is 97% homologous to STRAP at the amino acid level. The unr-interacting protein binds unr, a cytoplasmic RNA-binding protein with five cold-shock domains that is involved in RNA translation. The presence of the STRAP gene in a variety of species from mammals to yeast, indicates that STRAP function is evolutionarily conserved in eukaryotic cells.

REFERENCES

1. Datta, P.K., et al. 1998. Identification of STRAP, a novel WD domain protein in transforming growth factor β signaling. *J. Biol. Chem.* 273: 34671-34674.
2. Hunt, S.L., et al. 1999. UNR, a cellular cytoplasmic RNA-binding protein with five cold-shock domains, is required for internal initiation of translation of human rhinovirus RNA. *Genes Dev.* 13: 437-448.
3. Datta, P.K. and Moses, H.L. 2000. STRAP and Smad7 synergize in the inhibition of transforming growth factor β signaling. *Mol. Cell. Biol.* 20: 3157-3167.
4. Zhao, J., et al. 2000. Smad7 and Smad6 differentially modulate transforming growth factor β induced inhibition of embryonic lung morphogenesis. *J. Biol. Chem.* 275: 23992-23997.
5. LocusLink Report (LocusID: 11171). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: STRAP (human) mapping to 12p12.3, LOC344382 (human) mapping to 2p22.2; Strap (mouse) mapping to 6 G1.

SOURCE

STRAP (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of STRAP of mouse 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-14554 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.

RESEARCH USE

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

APPLICATIONS

STRAP (V-14) is recommended for detection of STRAP and LOC344382 of mouse, rat and 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).

STRAP (V-14) is also recommended for detection of STRAP and LOC344382 in additional species, including equine, canine, bovine and porcine.

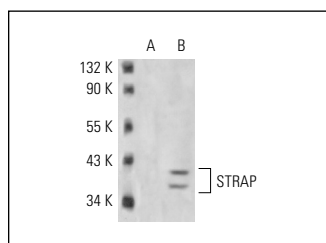
Molecular Weight of STRAP: 39 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse liver extract: sc-2256 or STRAP (h): 293 Lysate: sc-110599.

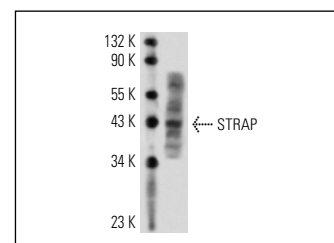
RECOMMENDED SECONDARY REAGENTS

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



STRAP (V-14): sc-14554. Western blot analysis of STRAP expression in non-transfected: sc-110760 (A) and human STRAP transfected: sc-110599 (B) 293 whole cell lysates.



STRAP (V-14): sc-14554. Western blot analysis of STRAP expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Fernández-Medarde, A., et al. 2007. Laser microdissection and microarray analysis of the hippocampus of Ras-GRF1 knockout mice reveals gene expression changes affecting signal transduction pathways related to memory and learning. *Neuroscience* 146: 272-285.

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Try **STRAP (E-8): sc-377345** or **STRAP (3G6): sc-130671**, our highly recommended monoclonal alternatives to STRAP (V-14).