SANTA CRUZ BIOTECHNOLOGY, INC.

STRAP (E-8): sc-377345

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Smad proteins play an important role in the intracellular signalling of the TGFβ superfamily of extracellular polypeptides. Two Smad proteins, Smad6 and Smad7, function as antagonists to TGFβ signalling. STRAP, another antagonist to the TGFβ signalling pathway, specifically interacts with Smad7, but not Smad6, to synergistically block TGFβ-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.

CHROMOSOMAL LOCATION

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

SOURCE

STRAP (E-8) is a mouse monoclonal antibody raised against amino acids 1-116 mapping at the N-terminus of STRAP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STRAP (E-8) is available conjugated to agarose (sc-377345 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377345 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377345 PE), fluorescein (sc-377345 FITC), Alexa Fluor® 488 (sc-377345 AF488), Alexa Fluor® 546 (sc-377345 AF546), Alexa Fluor® 594 (sc-377345 AF594) or Alexa Fluor® 647 (sc-377345 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377345 AF680) or Alexa Fluor® 790 (sc-377345 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

STRAP (E-8) is recommended for detection of STRAP of mouse, rat and 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).

STRAP (E-8) is also recommended for detection of STRAP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for STRAP siRNA (h): sc-44129, STRAP siRNA (m): sc-153911, STRAP shRNA Plasmid (h): sc-44129-SH, STRAP shRNA Plasmid (m): sc-153911-SH, STRAP shRNA (h) Lentiviral Particles: sc-44129-V and STRAP shRNA (m) Lentiviral Particles: sc-153911-V.

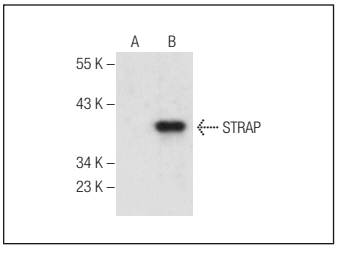
Molecular Weight of STRAP: 39 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, STRAP (h): 293 Lysate: sc-110599 or Neuro-2A whole cell lysate: sc-364185.

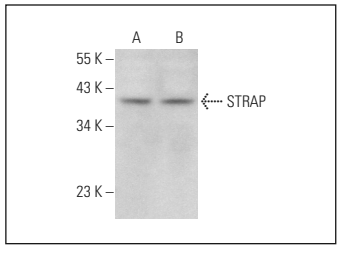
RECOMMENDED SUPPORT REAGENTS

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, 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-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



STRAP (E-8): sc-377345. Western blot analysis of STRAP expression in non-transfected: sc-110760 (**A**) and human STRAP transfected: sc-110599 (**B**) 293 whole cell lysates.



STRAP (E-8): sc-377345. Western blot analysis of STRAP expression in HeLa (**A**) and Neuro-2A (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gong, X., et al. 2018. Sanguinarine triggers intrinsic apoptosis to suppress colorectal cancer growth through disassociation between STRAP and MELK. BMC Cancer 18: 578.

RESEARCH USE

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