

## STRAP (E-8): sc-377345



The Power to Question

## BACKGROUND

Smad proteins play an important role in the intracellular signalling of the TGF $\beta$  superfamily of extracellular polypeptides. Two Smad proteins, Smad6 and Smad7, function as antagonists to TGF $\beta$  signalling. STRAP, another antagonist to the TGF $\beta$  signalling pathway, specifically interacts with Smad7, but not Smad6, to synergistically block TGF $\beta$ -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- $\beta$  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  $\beta$  signaling. *Mol. Cell. Biol.* 20: 3157-3167.
4. Zhao, J., et al. 2000. Smad7 and Smad6 differentially modulate transforming growth factor  $\beta$  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  $\mu$ g 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377345 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377345 PE), fluorescein (sc-377345 FITC), Alexa Fluor<sup>®</sup> 488 (sc-377345 AF488), Alexa Fluor<sup>®</sup> 546 (sc-377345 AF546), Alexa Fluor<sup>®</sup> 594 (sc-377345 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-377345 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-377345 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-377345 AF790), 200  $\mu$ g/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  $\mu$ 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 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.

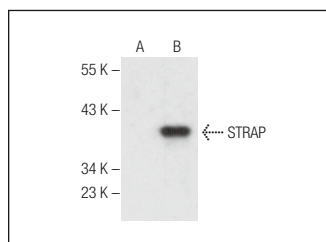
Molecular Weight of STRAP: 39 kDa.

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

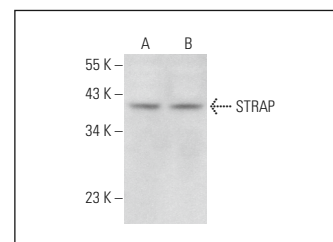
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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.

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