

# PAPST2 (T-14): sc-107922

## BACKGROUND

Sulfation is an important post-translational modification of proteoglycans, glycolipids and glycoproteins that requires activity of 3'-phosphoadenosine 5'-phosphosulfate (PAPS), the universal sulfate donor. PAPST2 (adenosine 3'-phospho 5'-phosphosulfate transporter 2), also known as SLC35B3 (solute carrier family 35 member B3) is a 401 amino acid Golgi apparatus protein that is predominantly expressed in human colon. Overexpression of either PAPST1 or PAPST2, both of which are members of the nucleotide-sugar transporter family, leads to increased PAPS transport activity within the colon. Knockdown of PAPST2 mRNA results in significantly reduced levels of siacyl 6-sulfo N-acteyllactosamine epitope and overall sulfate incorporation into cellular proteins. There are three isoforms of PAPST2 that are produced as a result of alternative splicing events.

## REFERENCES

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2. Kamiyama, S., et al. 2006. Molecular cloning and characterization of a novel 3'-phosphoadenosine 5'-phosphosulfate transporter, PAPST2. *J. Biol. Chem.* 281: 10945-10953.
3. Dejima, K., et al. 2006. Essential roles of 3'-phosphoadenosine 5'-phosphosulfate synthase in embryonic and larval development of the nematode *Caenorhabditis elegans*. *J. Biol. Chem.* 281: 11431-11440.
4. Goda, E., et al. 2006. Identification and characterization of a novel *Drosophila* 3'-phosphoadenosine 5'-phosphosulfate transporter. *J. Biol. Chem.* 281: 28508-28517.
5. van den Bosch, H.M., et al. 2007. Gene expression of transporters and phase I/II metabolic enzymes in murine small intestine during fasting. *BMC Genomics* 8: 267.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610845. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Bhattacharya, R., et al. 2009. The PAPS transporter PST-1 is required for heparan sulfation and is essential for viability and neural development in *C. elegans*. *J. Cell Sci.* 122: 4492-4504.

## CHROMOSOMAL LOCATION

Genetic locus: SLC35B3 (human) mapping to 6p24.3.

## SOURCE

PAPST2 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PAPST2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-107922 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PAPST2 (T-14) is recommended for detection of PAPST2 of human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with family member PAPST1.

PAPST2 (T-14) is also recommended for detection of PAPST2 in additional species, including equine, canine and avian.

Suitable for use as control antibody for PAPST2 siRNA (h): sc-95515, PAPST2 shRNA Plasmid (h): sc-95515-SH and PAPST2 shRNA (h) Lentiviral Particles: sc-95515-V.

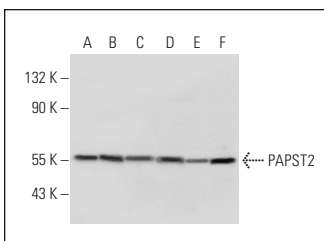
Molecular Weight of PAPST2: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or COLO 320DM cell lysate: sc-2226.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



PAPST2 (T-14): sc-107922. Western blot analysis of PAPST2 expression in HeLa (A), Hep G2 (B), COLO 320DM (C), HeLa (D), MES-SA/Dx5 (E) and Hep G2 (F) whole cell lysates.

## STORAGE

Store at 4° 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.