



SIMP (N-15): sc-100149

BACKGROUND

SIMP (source of immunodominant MHC-associated peptides), also known as STT3B (STT3, subunit of the oligosaccharyltransferase complex, homolog B), is an 826 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the STT3 family. Expressed in liver, heart, placenta, kidney, brain, muscle and pancreatic tissue, SIMP exists as a component of the multi-protein oligosaccharyltransferase (OST) complex and functions to catalyze the N-glycosylation of target proteins. More specifically, SIMP mediates the transfer of high mannose oligosaccharides from lipid-linked oligosaccharide donors to target asparagine residues on polypeptide chains. The gene encoding SIMP maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608605. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Shibatani, T., David, L.L., McCormack, A.L., Frueh, K. and Schach, W.R. 2005. Proteomic analysis of mammalian oligosaccharyltransferase reveals multiple subcomplexes that contain Sec61, TRAP, and two potential new subunits. *Biochemistry* 44: 5982-5992.
5. Kelleher, D.J. and Gilmore, R. 2006. An evolving view of the eukaryotic oligosaccharyltransferase. *Glycobiology* 16: 47R-62R.
6. Ruiz-Canada, C., Kelleher, D.J. and Gilmore, R. 2009. Cotranslational and posttranslational N-glycosylation of polypeptides by distinct mammalian OST isoforms. *Cell* 136: 272-283.

CHROMOSOMAL LOCATION

Genetic locus: STT3B (human) mapping to 3p23; Stt3b (mouse) mapping to 9 F3.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

SIMP (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of SIMP of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100149 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SIMP (N-15) is recommended for detection of SIMP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for SIMP siRNA (h): sc-78489, SIMP siRNA (m): sc-153468, SIMP shRNA Plasmid (h): sc-78489-SH, SIMP shRNA Plasmid (m): sc-153468-SH, SIMP shRNA (h) Lentiviral Particles: sc-78489-V and SIMP shRNA (m) Lentiviral Particles: sc-153468-V.

Molecular Weight of SIMP: 94 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.