

HS6ST2 (H-90): sc-98287

BACKGROUND

HSPGs (heparan sulfate proteoglycans) are long chains of HSs (heparan sulfates) which are connected to core proteins and are expressed ubiquitously on cell surfaces. HSs are thought to interact with many proteins including growth factors, morphogens and their receptors whose functions include the regulation of ligand stability. In the Golgi apparatus, HS structures are thought to be synthesized by heparan-sulfate chain modification enzymes. HS6ST2 (heparan sulfate 6-O-sulfotransferase 2), is a 605 amino acid single-pass type II membrane protein that belongs to the sulfotransferase 6 family. HS6ST2 catalyzes the transfer of sulfate from PAPSS to a specific position of the N-sulfoglucosamine residue of HS. It is suggested that the thyroid hormone negatively regulates expression of HS6ST2. Three isoforms exist due to alternative splicing events.

REFERENCES

1. Habuchi, H., et al. 2003. Biosynthesis of heparan sulphate with diverse structures and functions: two alternatively spliced forms of human heparan sulphate 6-O-sulphotransferase-2 having different expression patterns and properties. *Biochem. J.* 371: 131-142.
2. Smeds, E., et al. 2003. Substrate specificities of mouse heparan sulphate glucosaminyl 6-O-sulphotransferases. *Biochem. J.* 372: 371-380.
3. Bassett, J.H., et al. 2006. Thyroid hormone regulates heparan sulfate proteoglycan expression in the growth plate. *Endocrinology* 147: 295-305.
4. Do, A.T., et al. 2006. Overexpression of heparan sulfate 6-O-sulfotransferases in human embryonic kidney 293 cells results in increased N-acetylglucosaminyl 6-O-sulfation. *J. Biol. Chem.* 281: 5348-5356.
5. Kamimura, K., et al. 2006. Specific and flexible roles of heparan sulfate modifications in *Drosophila* FGF signaling. *J. Cell Biol.* 174: 773-778.
6. Backen, A.C., et al. 2007. Heparan sulphate synthetic and editing enzymes in ovarian cancer. *Br. J. Cancer* 96: 1544-1548.
7. Labbé, E., et al. 2007. Transcriptional cooperation between the transforming growth factor β and Wnt pathways in mammary and intestinal tumorigenesis. *Cancer Res.* 67: 75-84.
8. Nagai, N., et al. 2007. Regulation of heparan sulfate 6-O-sulfation by β -secretase activity. *J. Biol. Chem.* 282: 14942-14951.

CHROMOSOMAL LOCATION

Genetic locus: HS6ST2 (human) mapping to Xq26.2; Hs6st2 (mouse) mapping to X A5.

SOURCE

HS6ST2 (H-90) is a rabbit polyclonal antibody raised against amino acids 141-230 mapping within an internal region of HS6ST2 of human origin.

PRODUCT

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

APPLICATIONS

HS6ST2 (H-90) is recommended for detection of HS6ST2 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).

HS6ST2 (H-90) is also recommended for detection of HS6ST2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HS6ST2 siRNA (h): sc-75303, HS6ST2 siRNA (m): sc-75304, HS6ST2 shRNA Plasmid (h): sc-75303-SH, HS6ST2 shRNA Plasmid (m): sc-75304-SH, HS6ST2 shRNA (h) Lentiviral Particles: sc-75303-V and HS6ST2 shRNA (m) Lentiviral Particles: sc-75304-V.

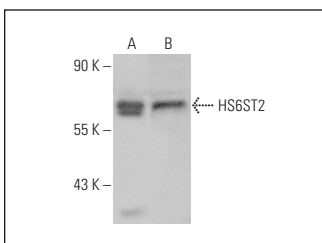
Molecular Weight of HS6ST2: 70 kDa.

Positive Controls: mouse prostate extract: sc-364249 or mouse testis extract: sc-2405.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



HS6ST2 (H-90): sc-98287. Western blot analysis of HS6ST2 expression in mouse prostate (A) and mouse testis (B) tissue extracts.

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.