



HS3ST6 (P-12): sc-107618

BACKGROUND

Heparan sulfate structures, which are responsible for executing multiple biological activities, are generated and regulated by heparan sulfate biosynthetic enzymes. HS3ST6 (heparan sulfate glucosamine 3-O-sulfotransferase 6) is a 342 amino acid single-pass type II transmembrane protein that localizes to the golgi apparatus and belongs to the sulfotransferase 1 family. HS3ST6 transfers sulfate to the 3-OH position of the glucosamine residue of heparan sulfate to form 3-O-sulfated heparan sulfate. Due to observed susceptibility of HS3ST6-transfected CHO cells to HSV-1 infection, it has been suggested that HS3ST6 produces a specific entry receptor for HSV-1. The gene encoding HS3ST6 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

1. Nakato, H. and Kimata, K. 2002. Heparan sulfate fine structure and specificity of proteoglycan functions. *Biochim. Biophys. Acta* 1573: 312-318.
2. Kamimura, K., Rhodes, J.M., Ueda, R., McNeely, M., Shukla, D., Kimata, K., Spear, P.G., Shworak, N.W. and Nakato, H. 2004. Regulation of Notch signaling by *Drosophila* heparan sulfate 3-O sulfotransferase. *J. Cell Biol.* 166: 1069-1079.
3. Xu, D., Tiwari, V., Xia, G., Clement, C., Shukla, D. and Liu, J. 2005. Characterization of heparan sulphate 3-O-sulphotransferase isoform 6 and its role in assisting the entry of herpes simplex virus type 1. *Biochem. J.* 385 (Pt 2): 451-459.
4. Muñoz, E., Xu, D., Kemp, M., Zhang, F., Liu, J. and Linhardt, R.J. 2006. Affinity, kinetic, and structural study of the interaction of 3-O-sulfotransferase isoform 1 with heparan sulfate. *Biochemistry* 45: 5122-5128.
5. de Agostini, A.I., Dong, J.C., de Vantery Arrighi, C., Ramus, M.A., Dentand-Quadri, I., Thalmann, S., Ventura, P., Ibecheole, V., Monge, F., Fischer, A.M., HajMohammadi, S., Shworak, N.W., Zhang, L., Zhang, Z. and Linhardt, R.J. 2008. Human follicular fluid heparan sulfate contains abundant 3-O-sulfated chains with anticoagulant activity. *J. Biol. Chem.* 283: 28115-28124.
6. Mantelli, F., Schaffer, L., Dana, R., Head, S.R. and Argüeso, P. 2009. Glycogene expression in conjunctiva of patients with dry eye: downregulation of Notch signaling. *Invest. Ophthalmol. Vis. Sci.* 50: 2666-2672.

CHROMOSOMAL LOCATION

Genetic locus: Hs3st6 (mouse) mapping to 17 A3.3.

SOURCE

HS3ST6 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HS3ST6 of mouse 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-107618 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HS3ST6 (P-12) is recommended for detection of HS3ST6 of mouse and rat 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 HS3ST6 siRNA (m): sc-146088, HS3ST6 shRNA Plasmid (m): sc-146088-SH and HS3ST6 shRNA (m) Lentiviral Particles: sc-146088-V.

Molecular Weight of HS3ST6: 37 kDa.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 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™ Mounting Medium: sc-24941.

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.