Human Heparan Sulfate 6-O-Sulfotransferase 1/HS6ST1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF5057

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human HS6ST1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse HS6ST3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	CHO cell-derived recombinant human HS6ST1 Pro28-Trp401 Accession # AAY14736
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

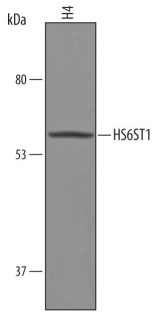
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Human HS6ST1 by Western Blot. Western blot shows lysates of H4 human neuroglioma cell line. PVDF Membrane was probed with 1 µg/mL of Human HS6ST1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5057) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for HS6ST1 at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Heparan Sulfate is a highly sulfated polysaccharide that can be found on cell surface and extracellular matrix. It is usually covalently attached to a protein core as the glycan component of a proteoglycan. Heparan Sulfate interacts with a variety of proteins, such as growth factors, protease inhibitors, cytokines, lipoprotein lipase and viral envelope proteins, thus plays roles from cell growth, cell differentiation, cell motility, blood coagulation, lipid metabolism to viral infection (1, 2). Heparan Sulfate consists of repeating residues of uronic acid and N-acetylglucosamine. The uronic acid residues can be sulfated at 2-O position by Heparan Sulfate 2-O Sulfotransferase (HS2ST). The N-acetylglucosamine residues can be sulfated at N-, 3-O, and 6-O positions by N-deacetylase/N-sulfotransferases (NDSTs), Heparan Sulfate 3-O and 6-O sulfotransferases (HS3STs and HS6STs) respectively. However, the reactions catalyzed by these sulfotransferases are normally incomplete on the whole chain of Heparan Sulfate. As a result, Heparan Sulfate displays enormous sequence diversity that allows it to interact with a wide spectrum of proteins differently. Among three HS6STs, HS6ST1 is the first to be cloned (3). Mice deficient of the HS6ST1 homologue gene showed embryonic lethality (4).

References:

1. Bernfield, M. *et al.* (1999) Annu. Rev. Biochem. **68**:729.
2. Esko, J.D. and S.B. Selleck (2002) Annu. Rev. Biochem. **71**:435.
3. Habuchi, H *et al.* (1998) J. Biol. Chem. **273**:9208.
4. Habuchi, H *et al.* (2007) J. Biol. Chem. **282**:15578.
5. Robbins, P.W. (1962) Methods in Enzymology, Vol. V, Academic Press, Inc., New York, 964.
6. MacRae, I.J. *et al.* (2000) Biochemistry **39**:1613.
7. Wu, Z.L. *et al.* (2002) Faseb J. **16**:539.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449