

C6ST-1 (G-9): sc-271696

BACKGROUND

Sulfotransferase enzymes catalyze the sulfate conjugation of many hormones, neurotransmitters, drugs and xenobiotic compounds. These cytosolic enzymes differ in their tissue distribution and substrate specificities, although the gene structure (number and length of exons) is similar among family members. Sulfotransferases are primarily expressed in liver and adrenal tissues, where they add sulfate to steroids and bile acids. Chondroitin 6-sulfotransferase-1 (C6ST-1) is a 486 amino acid protein that localizes in the Golgi apparatus, where it sulfates both chondroitin and keratan sulfate. C6ST-1 is developmentally regulated in many different tissues, with expression continuing through adulthood in the spleen. When C6ST-1 expression is upregulated, the motility of Schwann cells that guide growing axons through both developmental and injured environments increases.

REFERENCES

1. Fukuta, M., et al. 1995. Molecular cloning and expression of chick chondrocyte chondroitin 6-sulfotransferase. *J. Biol. Chem.* 270: 18575-18580.
2. Gauguet, J.M., et al. 2004. Core 2 branching β 1,6-N-acetylglucosaminyltransferase and high endothelial cell N-acetylglucosamine-6-sulfotransferase exert differential control over B- and T-lymphocyte homing to peripheral lymph nodes. *Blood* 104: 4104-4112.
3. Uchimura, K., et al. 2004. N-acetylglucosamine-6-O-sulfotransferase-1 regulates expression of L-Selectin ligands and lymphocyte homing. *J. Biol. Chem.* 279: 35001-35008.
4. de Graffenried, C.L. and Bertozzi, C.R. 2004. The stem region of the sulfotransferase GlcNAc6ST-1 is a determinant of substrate specificity. *J. Biol. Chem.* 279: 40035-40043.

CHROMOSOMAL LOCATION

Genetic locus: CHST3 (human) mapping to 10q22.1; Chst3 (mouse) mapping to 10 B4.

SOURCE

C6ST-1 (G-9) is a mouse monoclonal antibody raised against amino acids 1-110 mapping at the N-terminus of C6ST-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

C6ST-1 (G-9) is available conjugated to agarose (sc-271696 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271696 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271696 PE), fluorescein (sc-271696 FITC), Alexa Fluor® 488 (sc-271696 AF488), Alexa Fluor® 546 (sc-271696 AF546), Alexa Fluor® 594 (sc-271696 AF594) or Alexa Fluor® 647 (sc-271696 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271696 AF680) or Alexa Fluor® 790 (sc-271696 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

C6ST-1 (G-9) is recommended for detection of C6ST-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 C6ST-1 siRNA (h): sc-60305, C6ST-1 siRNA (m): sc-60306, C6ST-1 shRNA Plasmid (h): sc-60305-SH, C6ST-1 shRNA Plasmid (m): sc-60306-SH, C6ST-1 shRNA (h) Lentiviral Particles: sc-60305-V and C6ST-1 shRNA (m) Lentiviral Particles: sc-60306-V.

Molecular Weight of C6ST-1: 56 kDa.

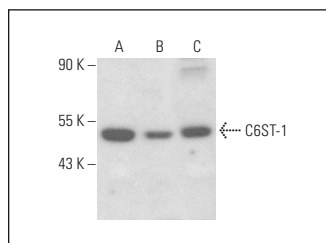
Positive Controls: A-10 cell lysate: sc-3806, U-251-MG whole cell lysate: sc-364176 or TF-1 cell lysate: sc-2412.

RECOMMENDED SUPPORT REAGENTS

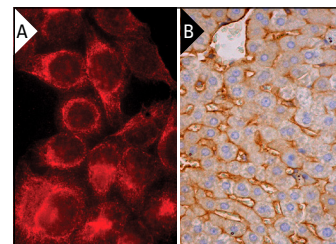
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



C6ST-1 (G-9): sc-271696. Western blot analysis of C6ST-1 expression in U-251-MG (A), TF-1 (B) and A-10 (C) whole cell lysates.



C6ST-1 (G-9): sc-271696. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining of hepatocytes and sinusoids (B).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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