

HS2ST1 (G-10): sc-376530

BACKGROUND

Heparan sulfate structures, which are responsible for executing multiple biologic activities, are generated and regulated by heparan sulfate biosynthetic enzymes. HS2ST1 (heparan sulfate 2-O-sulfotransferase 1), also known as HS2ST, is a 356 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and belongs to the sulfotransferase 3 family. Expressed as multiple alternatively spliced isoforms, HS2ST1 functions to catalyze the transfer of sulfate groups to hexuronic acid residues within maturing heparan sulfate (HS), an event which is crucial for proper HS-related ligand binding and signaling processes. HS2ST1 is subject to post-translational N-glycosylation and, in addition to its role in HS function, may be involved in proper kidney formation.

CHROMOSOMAL LOCATION

Genetic locus: HS2ST1 (human) mapping to 1p22.3; Hs2st1 (mouse) mapping to 3 H2.

SOURCE

HS2ST1 (G-10) is a mouse monoclonal antibody raised against amino acids 1-170 mapping at the N-terminus of HS2ST1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HS2ST1 (G-10) is available conjugated to agarose (sc-376530 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376530 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376530 PE), fluorescein (sc-376530 FITC), Alexa Fluor® 488 (sc-376530 AF488), Alexa Fluor® 546 (sc-376530 AF546), Alexa Fluor® 594 (sc-376530 AF594) or Alexa Fluor® 647 (sc-376530 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376530 AF680) or Alexa Fluor® 790 (sc-376530 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HS2ST1 (G-10) is recommended for detection of HS2ST1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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). HS2ST1 (G-10) is also recommended for detection of HS2ST1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for HS2ST1 siRNA (h): sc-88331, HS2ST1 siRNA (m): sc-105540, HS2ST1 shRNA Plasmid (h): sc-88331-SH, HS2ST1 shRNA Plasmid (m): sc-105540-SH, HS2ST1 shRNA (h) Lentiviral Particles: sc-88331-V and HS2ST1 shRNA (m) Lentiviral Particles: sc-105540-V.

Molecular Weight (predicted) of HS2ST1: 42 kDa.

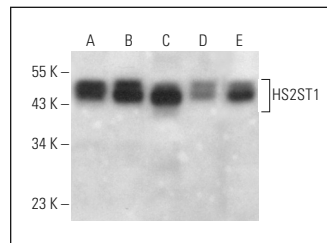
Molecular Weight (observed) of HS2ST1: 43-56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Ramos cell lysate: sc-2216 or Hep G2 cell lysate: sc-2227.

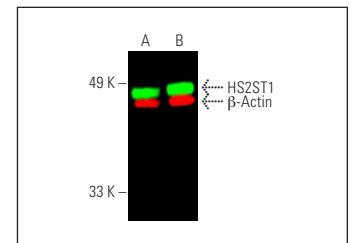
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HS2ST1 (G-10): sc-376530. Western blot analysis of HS2ST1 expression in HeLa (A), Ramos (B), Hep G2 (C), CCRF-CEM (D) and Jurkat (E) whole cell lysates.



Simultaneous direct near-infrared western blot analysis of HS2ST1 expression, detected with HS2ST1 (G-10) Alexa Fluor® 680: sc-376530 AF680 and β-Actin expression, detected with β-Actin (C4) Alexa Fluor® 790: sc-47778 AF790 in Caco-2 (A) and Jurkat (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Heidari-Hamedani, G., et al. 2015. Syndecan-1 alters heparan sulfate composition and signaling pathways in malignant mesothelioma. *Cell. Signal.* 27: 2054-2067.
- Cui, H., et al. 2021. Re-expression of glucuronyl C5-epimerase in the mutant MEF cells increases heparan sulfate epimerization but has no influence on the Golgi localization and enzymatic activity of 2-O-sulfotransferase. *Glycobiology* 31: 1018-1025.

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 for detailed protocols and support products.

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