**DESCRIPTION**

**Species Reactivity** Human

**Specificity** Detects human Heparan Sulfate 2-O-Sulfotransferase 1/HS2ST1 in ELISAs and Western blots.

**Source** Monoclonal Mouse IgG, Clone # 738306

**Purification** Protein A or G purified from hybridoma culture supernatant

**Immunogen** Chinese hamster ovary cell line CHO-derived recombinant human Heparan Sulfate 2-O-Sulfotransferase 1/HS2ST1 Met59-Asn356 Accession # Q7LGA3

**Formulation** Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**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**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Western Blot</th>
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<tr>
<td>2 µg/mL</td>
<td>See Below</td>
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**DATA**

**Western Blot**

Detection of Human Heparan Sulfate 2-O-Sulfotransferase 1/HS2ST1 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line and SH-SY5Y human neuroblastoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Heparan Sulfate 2-O-Sulfotransferase 1/HS2ST1 Monoclonal Antibody (Catalog # MAB6335) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Heparan Sulfate 2-O-Sulfotransferase 1/HS2ST1 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**PREPARATION AND STORAGE**

**Reconstitution** Sterile PBS to a final concentration of 0.5 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 supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**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 found on the cell surface and within the extracellular matrix. Typically, it is covalently attached to the protein core of proteoglycans, such as syndecans and glypicans. Heparin, on the other hand, can be considered as a highly sulfated version of heparan sulfate that is predominantly found in mast cells. Both heparin and heparan sulfate contain disaccharide repeats of uronic acid and N-acetylglucosamine and are modified by the same sulfotransferases (1, 2). The uronic acid residues are either glucuronic acid or iduronic acid and maybe sulfated at the 2-O position by heparan sulfate 2-O-sulfotransferase 1 (HS2ST1) (3, 4). HS2ST1 physically interacts in the Golgi apparatus with glucuronyl c5-epimerase (5), which catalyzes the conversion of glucuronic acid to iduronic acid (6). As a consequence, 2-O sulfation predominantly occurs on iduronic acids naturally and overexpression of HS2ST1 alone causes an increase in 2-O sulfation on glucuronic acid (7).

**References:**