# Human Heparan Sulfate 3-O-Sulfotransferase 1/HS3ST1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF5968

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human HS3ST1 in direct ELISAs and Western blots. |
| **Source** | Polyclonal Sheep IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Chinese hamster ovary cell line CHO-derived recombinant human HS3ST1<br>Arg21-His307<br>Accession # O14792 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS. |

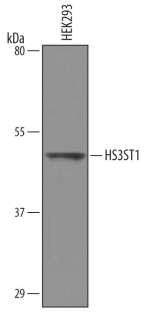
## APPLICATIONS

**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 |
| **Immunoprecipitation** | 25 µg/mL | Conditioned cell culture medium spiked with Recombinant Human HS3ST1 (Catalog # 5968-ST), see our available Western blot detection antibodies |

## DATA

**Western Blot**




**Detection of Human HS3ST1 by Western Blot.** Western blot shows lysates of HEK293 human embryonic kidney cell line. PVDF Membrane was probed with 1 µg/mL of Human HS3ST1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5968) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for HS3ST1 at approximately 48 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 0.2 mg/mL. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

Heparan sulfate is a highly sulfated polysaccharide that can be found on cell surface and within extracellular matrix. It is typically 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 detached from the protein core and 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 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 sulfotransferases (HS3STs) and heparan sulfate 6-O sulfotransferases (HS6STs) respectively. There are seven HS3STs in the human genome (3, 4). HS3ST1 is a rate-limiting enzyme for generating an antithrombin-binding pentasaccharide epitope on heparan sulfate and heparin (5, 6). Unlike other sulfotransferases that have signal-anchor domains and are type II membrane integral proteins in Golgi apparatus, HS3ST1 lacks a transmembrane domain and is likely to be an intraluminal enzyme (7, 8).

**References:**

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