

#### DESCRIPTION

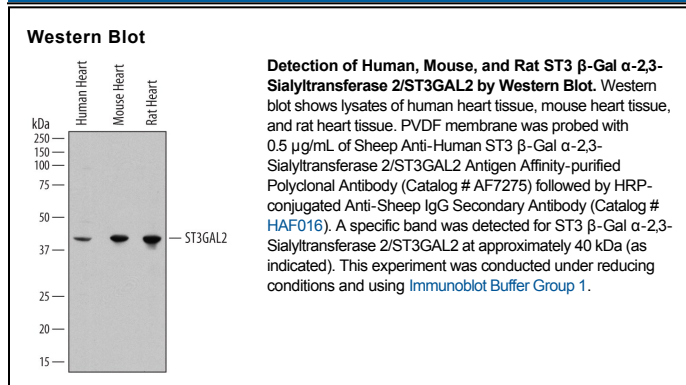
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse and rat ST3 $\beta$ -Gal $\alpha$ -2,3-Sialyltransferase 2/ST3GAL2 in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) ST6GALNAC4 and rhST3GAL1 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human ST3 $\beta$ -Gal $\alpha$ -2,3-Sialyltransferase 2/ST3GAL2 Pro52-Gln350 Accession # NP_008858
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ m 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.5 $\mu$ g/mL	See Below

#### DATA



#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

Sialyltransferases add sialic acid to glycoproteins or glycosphingolipids and play important roles in many biological processes including immune recognition, pathogen infection, and cell adhesion (1). Similar to ST3GAL1 (2), ST3GAL2 is a type II membrane protein localized in the trans-Golgi network that can transfer sialic acid to the Gal $\beta$ 1-3GalNAc structure to form NeuAc $\alpha$ 2-3Gal $\beta$ 1-3GalNAc found in terminal carbohydrate groups of particular glycoproteins, oligosaccharides and glycolipids (3). Unlike the ubiquitously expressed ST3GAL1 (4), ST3GAL2 is mainly expressed in heart, liver, skeletal muscle and various lymphoid tissues but not in brain and kidney (3). ST3GAL2 is responsible for the synthesis of monosialosyl globopentaosylceramide (MSGb5), also known as stage-specific embryonic antigen-4 (SSEA4) (5), a cell surface marker for testicular germ cell carcinoma, renal cell carcinoma, and mesenchymal stem cells (6). The enzymatic activity of recombinant human ST3GAL2 was determined using a phosphatase-coupled glycosyltransferase assay (7). Over aa 52-350 human ST3GAL2 share 94% aa sequence identity with mouse and rat.

#### References:

1. Varki, A. (1999) *Glycobiology* **2**:25.
2. Jeanneau, C. *et al.* (2004) *J. Biol. Chem.* **279**:13461.
3. Giordanengo, V. *et al.* (1997) *Eur. J. Biochem.* **247**:558.
4. Kitagawa, H. and Paulson, J.C. (1994) *J. Biol. Chem.* **269**:17872.
5. Saito, S. *et al.* (2003) *J. Biol. Chem.* **278**:26474.
6. Suila, H. *et al.* (2011) *J. Mol. Cell Biol.* **3**:99.
7. Wu, Z.L. *et al.* (2011) *Glycobiology* **21**:727.