

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ST6 Gal Sialyltransferase 2/ST6GAL2 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human ST6GAL1 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 ST6 Gal Sialyltransferase 2/ST6GAL2 Glu243-Ser529 Accession # Q96JF0
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

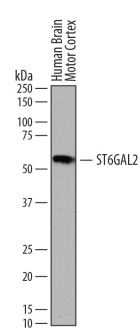
## APPLICATIONS

**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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

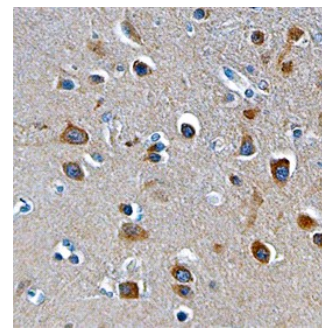
## DATA

### Western Blot



**Detection of Human ST6 Gal Sialyltransferase 2/ST6GAL2 by Western Blot.** Western blot shows lysates of human brain (motor cortex) tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human ST6 Gal Sialyltransferase 2/ST6GAL2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7747) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for ST6 Gal Sialyltransferase 2/ST6GAL2 at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

### Immunohistochemistry



**ST6 Gal Sialyltransferase 2/ST6GAL2 in Human Brain.** ST6 Gal Sialyltransferase 2/ST6GAL2 was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Sheep Anti-Human ST6 Gal Sialyltransferase 2/ST6GAL2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7747) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counter-stained with hematoxylin (blue). Specific staining was localized to the cytoplasm of neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## 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

ST6GAL2 (Sialyltransferase 2; also  $\beta$ -galactoside  $\alpha$ -2,6 Sialyltransferase 2) is a 60-62 kDa member of the glycosyltransferase 29 family of enzymes. It has restricted expression, likely being found in neurons and bronchial epithelium. ST6GAL2 transfers sialic acid from CMP-Neu5Ac to a galactose that is linked to N-Aceylglucosamine through a  $\beta$ 1-4 linkage (Gal $\beta$ 1-4GlcNAc). This transfer will occur when the target motif is found either on select glycoproteins or free oligosaccharides. Notably, the kinetics of this enzyme suggest additional biological functions other than sialic acid transfer. Human ST6GAL2 is a 529 amino acid (aa) type II transmembrane Golgi protein. It contains an 11 aa N-terminal cytoplasmic region and a 497 aa luminal domain (aa 33-529). The luminal domain possesses an L motif that binds CMP-Sialic acid (aa 296-343), an S motif that binds CMP-Sialic acid and galactose (aa 444-458) and a VS motif that is involved with the enzyme's catalytic activity (aa 483-488). There is some evidence that ST6GAL2 may form homodimers. There is one splice variant that shows a 26 aa substitution for aa 441-529. Over aa 243-529, human ST6GAL2 shares 88% aa sequence identity with mouse ST6GAL2.