

## GAL3ST1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP8884c

### Specification

# GAL3ST1 Antibody (Center) - Product Information

Application Primary Accession Reactivity Host Clonality Isotype Antigen Region FC, WB, IHC-P,E <u>099999</u> Human, Mouse Rabbit Polyclonal Rabbit IgG 88-116

### GAL3ST1 Antibody (Center) - Additional Information

### Gene ID 9514

Other Names Galactosylceramide sulfotransferase, GalCer sulfotransferase, 3'-phosphoadenosine-5'-phosphosulfate:GalCer sulfotransferase, 3'-phosphoadenylylsulfate:galactosylceramide 3'-sulfotransferase, Cerebroside sulfotransferase, GAL3ST1, CST

### Target/Specificity

This GAL3ST1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 88-116 amino acids from the Central region of human GAL3ST1.

Dilution FC~~1:10~50 WB~~1:2000 IHC-P~~1:50~100 E~~Use at an assay dependent concentration.

### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### **Precautions**

GAL3ST1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## GAL3ST1 Antibody (Center) - Protein Information



Name GAL3ST1 (HGNC:24240)

**Function** Catalyzes the transfer of a sulfate group to position 3 of non-reducing beta-galactosyl residues in glycerolipids and sphingolipids, therefore participates in the biosynthesis of sulfoglycolipids (PubMed:<u>8830034</u>, PubMed:<u>9030544</u>). Catalyzes the synthesis of galactosylceramide sulfate (sulfatide), a major lipid component of the myelin sheath and of monogalactosylalkylacylglycerol sulfate (seminolipid), present in spermatocytes (PubMed:<u>8830034</u>). Seems to prefer beta-glycosides at the non-reducing termini of sugar chains attached to a lipid moiety (PubMed:<u>8830034</u>). Also acts on lactosylceramide, galactosyl 1-alkyl-2-sn-glycerol and galactosyl diacylglycerol (in vitro) (PubMed:<u>8830034</u>).

## **Cellular Location**

Golgi apparatus membrane; Single- pass type II membrane protein

### **Tissue Location**

Expressed in kidney proximal tubule, gastric mucosa and adenocarcinoma (PubMed:10785389, PubMed:9030544). Highly expressed in renal cell carcinoma cell lines (PubMed:8830034, PubMed:9030544)

## GAL3ST1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- <u>Cell Culture</u>

## GAL3ST1 Antibody (Center) - Images



Western blot analysis of GAL3ST1 Antibody (Center) (Cat. #AP8884c) in mouse cerebellum tissue lysates (35ug/lane). GAL3ST1 (arrow) was detected using the purified Pab.





All lanes : Anti-GAL3ST1 Antibody (Center) at 1:2000 dilution Lane 1: Human kidney lysate Lane 2: Mouse kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human brain tissue reacted with GAL3ST1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



GAL3ST1 Antibody (Center) (Cat. #AP8884c) flow cytometric analysis of CEM cells (right



histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

# GAL3ST1 Antibody (Center) - Background

Sulfonation, an important step in the metabolism of many drugs, xenobiotics, hormones, and neurotransmitters, is catalyzed by sulfotransferases. GAL3ST1 is galactosylceramide sulfotransferase which catalyzes the conversion between 3'-phosphoadenylylsulfate + a galactosylceramide to adenosine 3',5'-bisphosphate + galactosylceramide sulfate. Activity of this sulfotransferase is enhanced in renal cell carcinoma.

## GAL3ST1 Antibody (Center) - References

Siegrist, H.P., et.al., Biochim. Biophys. Acta 489 (1), 58-63 (1977) Stein, C., et.al., J. Biol. Chem. 264 (2), 1252-1259 (1989)