

CHST10 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP50588

Product Information

Application	WB, IHC
Primary Accession	O43529
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	42207

Additional Information

Gene ID	9486
Other Names	Carbohydrate sulfotransferase 10, 282-, HNK-1 sulfotransferase, HNK-1ST, HNK1ST, HuHNK-1ST, CHST10
Dilution	WB~~ 1:1000 IHC~~1:50-1:100
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20°C

Protein Information

Name	CHST10 {ECO:0000303 PubMed:23269668, ECO:0000312 HGNC:HGNC:19650}
Function	Catalyzes the transfer of sulfate from 3'-phosphoadenylyl sulfate (PAPS) to position 3 of terminal glucuronic acid of both protein- and lipid-linked oligosaccharides. Participates in biosynthesis of HNK-1 carbohydrate structure 3-O-sulfo-beta-D-GlcA- (1->3)-beta-D-Gal-(1->4)-D-GlcNAc-R, a sulfated glucuronyl-lactosaminyl residue carried by many neural recognition molecules, which is involved in cell interactions during ontogenetic development and in synaptic plasticity in the adult. May be indirectly involved in synapse plasticity of the hippocampus, via its role in HNK-1 biosynthesis (PubMed: 9478973). Sulfates terminal glucuronyl residue of the laminin globular (LG)-domain binding epitope on DAG1/alpha-dystroglycan and prevents further polymerization by LARGE1 glycosyltransferase. Likely defines the chain length of LG epitope, conferring binding specificity to extracellular matrix components (PubMed: 32149355). Plays a role in down-regulating the steroid hormones. Sulfates glucuronidated estrogens and androgens with an impact in hormone cycle and fertility. Has a preference for glucuronyl moiety at the 3-hydroxyl group of a sterol ring rather than the 17-hydroxyl group,

showing high catalytic efficiency for 17 β -estradiol 3-O-(β -D-glucuronate) and dehydroepiandrosterone 3-O-(β -D-glucuronate) hormones (PubMed:[23269668](#)).

Cellular Location

Golgi apparatus membrane {ECO:0000250 | UniProtKB:O54702}; Single-pass type II membrane protein

Tissue Location

In fetal tissues, it is predominantly expressed in brain, and weakly expressed in lung, kidney and liver. In adult, it is highly expressed in brain, testis, ovary, expressed at intermediate level in heart, pancreas, skeletal muscle, spleen and thymus, and weakly expressed in other tissues. In brain, it is expressed at higher level in the frontal lobe.

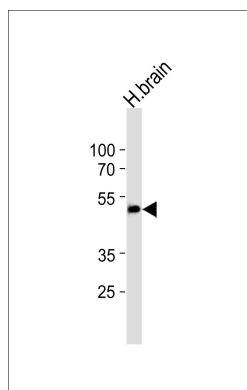
Background

Catalyzes the transfer of sulfate to position 3 of terminal glucuronic acid of both protein- and lipid-linked oligosaccharides. Participates in biosynthesis of HNK-1 carbohydrate structure, a sulfated glucuronyl-lactosaminyl residue carried by many neural recognition molecules, which is involved in cell interactions during ontogenetic development and in synaptic plasticity in the adult. May be indirectly involved in synapse plasticity of the hippocampus, via its role in HNK-1 biosynthesis.

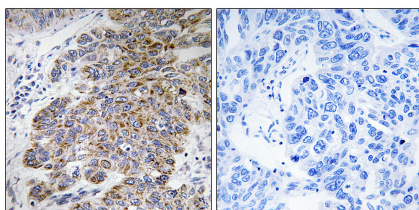
References

Ong E., et al. J. Biol. Chem. 273:5190-5195(1998).
Yu W., et al. Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
Ota T., et al. Nat. Genet. 36:40-45(2004).
Hillier L.W., et al. Nature 434:724-731(2005).
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



Western blot analysis of lysate from human brain tissue lysate, using CHST10 Antibody (AP50588). AP50588 was diluted at 1:1000. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35 μ g.



Immunohistochemistry analysis of paraffin-embedded human lung carcinoma tissue, using CHST10 antibody.