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Slc35D1 Antibody

Catalog # ASC10693

Product Information

Application	WB, ICC, E
Primary Accession	Q9NTN3
Other Accession	NP_055954, 14028875
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	39240
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Slc35D1 antibody can be used for detection of Slc35D1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunocytochemistry starting at 5 g/mL.

Additional Information

Gene ID	23169
Other Names	UDP-glucuronic acid/UDP-N-acetylgalactosamine transporter, UDP-GlcA/UDP-GalNAc transporter, Solute carrier family 35 member D1, UDP-galactose transporter-related protein 7, UGTrel7, SLC35D1, KIAA0260, UGTREL7
Target/Specificity	SLC35D1; This antibody is predicted to not cross-react with the highly homologous Slc35D2.
Reconstitution & Storage	Slc35D1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Slc35D1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC35D1 {ECO:0000303|PubMed:31423530}
Synonyms	KIAA0260, UGTREL7
Function	Antiporter that transports nucleotide sugars across the endoplasmic reticulum (ER) membrane in exchange for either their cognate nucleoside monophosphate or another nucleotide sugar (PubMed:16965264, PubMed:17599910, PubMed:31423530). Transports various UDP-sugars

	including UDP-N-acetyl-alpha-D-glucosamine (UDP-GlcNAc), UDP-N-acetyl-alpha-D-galactosamine (UDP-GalNAc) and UDP-alpha-D-glucuronate (UDP-GlcA), which are used by ER glucosyltransferases as sugar donors for the synthesis of sugar chains of glycoproteins, glycolipids and oligosaccharides (PubMed:11322953, PubMed:16965264, PubMed:17599910, PubMed:17952091, PubMed:31423530). May couple UDP- GlcNAc or UDP-GalNAc efflux to UDP-GlcA influx into the ER lumen that in turn stimulates glucuronidation and subsequent excretion of endobiotics and xenobiotics (PubMed:16965264, PubMed:17599910). Plays a role in chondroitin sulfate biosynthesis, which is important for formation of cartilage extracellular matrix and normal skeletal development (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Ubiquitous..

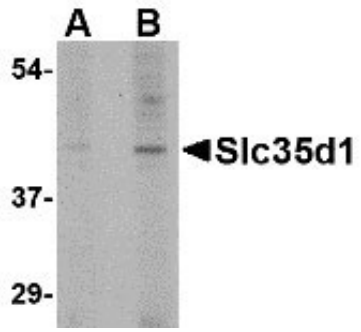
Background

Slc35D1 Antibody: The solute carrier family Slc35 consists of at least 17 proteins that act as nucleotide sugar transporters localized to the Golgi apparatus and endoplasmic reticulum. The role of the ER-resident Slc family member Slc35D1 is to transport both UDP-glucuronic acid and UDP-N-acetylgalactosamine. These molecules can serve as substrates for chondroitin sulfate biosynthesis and mice lacking the Slc35D1 gene developed a lethal form of skeletal dysplasia with severe shortening of limbs and facial structures. Examination of epiphyseal cartilage in these mice revealed a decreased proliferating zone with round chrondrocytes, scarce matrices, and reduced proteoglycan aggregates. Loss of function mutations in human Slc35D1 cause Schneckenbecken dysplasia, a severe skeletal dysplasia.

References

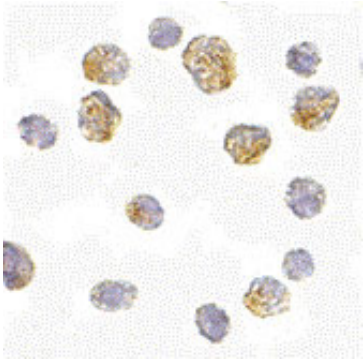
Ishida N and Kawakita M. Molecular physiology and pathology of the nucleotide sugar transporter family (SLC35). Pflugers Arch.2004; 447:768-75.
Muraoka M, Kawakita M, and Ishita N. Molecular characterization of human UDP-glucuronic acid/UDP-N-acetylgalactosamine transporter, a novel nucleotide sugar transporter with dual substrate specificity. FEBS Lett.2001; 495:87-93.
Hiraoka S, Furuichi T, Nishimura G, et al. Nucleotide-sugar transporter Slc35D1 is critical to chondroitin sulfate synthesis in cartilage and skeletal development in mouse and human. Nat. Med.2007; 13:1363-7.

Images



Western blot analysis of Slc35D1 in Daudi lysate with Slc35D1 antibody at (A) 1 and (B) 2 µg/mL.

Immunocytochemistry of Slc35D1 in Daudi cells with Slc35D1 antibody at 5 µg/mL.



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