SANTA CRUZ BIOTECHNOLOGY, INC.

SLC35D1 (P-13): sc-165495

BACKGROUND

SLC35D1 (solute carrier family 35 (UDP-glucuronic acid/UDP-N-acetylgalactosamine dual transporter), member D1), also known as UGTREL7, is a 355 amino acid multi-pass membrane protein that belongs to the TPT transporter family and the SLC35D subfamily. Ubiquitously expressed, SLC35D1 transports both UDP-glucuronic acid (UDP-GlcA) and UDP-N-acetylgalactosamine (UDP-GalNAc) from the cytoplasm to into the endoplasmic reticulum lumen. SLC35D1 may also participate in glucuronidation and/or chondroitin sulfate biosynthesis. Defects in SLC35D1 are a cause of Schneckenbecken dysplasia (SCHBCKD). Schneckenbecken dysplagia is a rare, autosomal recessive, lethal short-limbed skeletal dysplasia with platyspondylia. The SLC35D1 gene is conserved in chimpanzee, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans, A. thaliana* and rice, and maps to human chromosome 1p31.3.

REFERENCES

1. Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. VI. The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by analysis of cDNA clones from cell line KG-1 and brain. DNA Res. 3: 321-329.
2. Muraoka, M., et al. 2001. Molecular characterization of human UDP-glucuronic acid/UDP-N-acetylgalactosamine transporter, a novel nucleotide sugar transporter with dual substrate specificity. FEBS Lett. 495: 87-93.
3. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
4. Hiraoka, S., et al. 2007. Nucleotide-sugar transporter SLC35D1 is critical to chondroitin sulfate synthesis in cartilage and skeletal development in mouse and human. Nat. Med. 13: 1363-1367.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610804. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Furuichi, T., et al. 2009. Identification of loss-of-function mutations of SLC35D1 in patients with Schneckenbecken dysplasia, but not with other severe spondylodysplastic dysplasias group diseases. J. Med. Genet. 46: 562-568.

CHROMOSOMAL LOCATION

Genetic locus: SLC35D1 (human) mapping to 1p31.3; Slc35d1 (mouse) mapping to 4 C6.

SOURCE

SLC35D1 (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC35D1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165495 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLC35D1 (P-13) is recommended for detection of SLC35D1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with SLC35D2 or SLC35D3.

SLC35D1 (P-13) is also recommended for detection of SLC35D1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC35D1 siRNA (h): sc-88580, SLC35D1 siRNA (m): sc-153536, SLC35D1 shRNA Plasmid (h): sc-88580-SH, SLC35D1 shRNA Plasmid (m): sc-153536-SH, SLC35D1 shRNA (h) Lentiviral Particles: sc-88580-V and SLC35D1 shRNA (m) Lentiviral Particles: sc-153536-V.

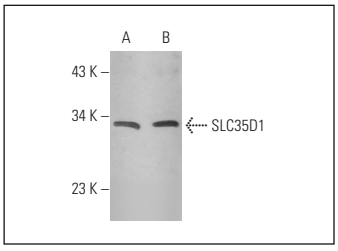
Molecular Weight of SLC35D1: 39 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SLC35D1 (P-13): sc-165495. Western blot analysis of SLC35D1 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.