# SANTA CRUZ BIOTECHNOLOGY, INC.

# UGTREL1 (S-13): sc-132864



# BACKGROUND

UGTREL1 (UDP-galactose transporter related protein 1), also known as SLC35B1 (solute carrier family 35 member B1), is a 325 amino acid multi-pass membrane protein that belongs to the SLC35B subfamily of the nucleotide-sugar transporter (NST) family. Members of the NST family are transmembrane proteins that mediate the translocation of nucleotide-sugars from the cytosol to the interior lumen of the endoplasmic reticulum (ER) and the Golgi apparatus via an antiport mechanism, exchanging nucleoside monophosphates for nucleotide-sugars. This activity of NSTs is important for providing an available source of nucleotide-sugars for glycoconjugate synthesis. Localizing to the endoplasmic reticulum membrane, UGTREL1 functions as a sugar transporter and shows significant similarity to the yeast UDP-N-acetylglucosamine transporter.

### REFERENCES

- Ishida, N., et al. 1996. Molecular cloning and characterization of a novel isoform of the human UDP-galactose transporter, and of related complementary DNAs belonging to the nucleotide-sugar transporter gene family. J. Biochem. 120: 1074-1078.
- 2. Ishida, N., et al. 1998. Functional expression of human Golgi CMP-sialic acid transporter in the Golgi complex of a transporter-deficient Chinese hamster ovary cell mutant. J. Biochem. 124: 171-178.
- Aoki, K., et al. 2001. Substrate recognition by UDP-galactose and CMP-sialic acid transporters. Different sets of transmembrane helices are utilized for the specific recognition of UDP-galactose and CMP-sialic acid. J. Biol. Chem. 276: 21555-21561.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610790. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Aoki, K., et al. 2003. Substrate recognition by nucleotide sugar transporters: further characterization of substrate recognition regions by analyses of UDPgalactose/CMP-sialic acid transporter chimeras and biochemical analysis of the substrate specificity of parental and chimeric transporters. J. Biol. Chem. 278: 22887-22893.
- Ishida, N., et al. 2004. Molecular physiology and pathology of the nucleotide sugar transporter family (SLC35). Pflugers Arch. 447: 768-775.
- Kobayashi, T., et al. 2006. Molecular and functional characterization of microsomal UDP-glucuronic acid uptake by members of the nucleotide sugar transporter (NST) family. Biochem. J. 400: 281-289.
- Muraoka, M., et al. 2007. Variety of nucleotide sugar transporters with respect to the interaction with nucleoside mono- and diphosphates. J. Biol. Chem. 282: 24615-24622.

#### CHROMOSOMAL LOCATION

Genetic locus: SLC35B1 (human) mapping to 17q21.33; Slc35b1 (mouse) mapping to 11 D.

#### **RESEARCH USE**

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

# SOURCE

UGTREL1 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UGTREL1 of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132864 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

UGTREL1 (S-13) is recommended for detection of UGTREL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

UGTREL1 (S-13) is also recommended for detection of UGTREL1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for UGTREL1 siRNA (h): sc-94212, UGTREL1 siRNA (m): sc-154909, UGTREL1 shRNA Plasmid (h): sc-94212-SH, UGTREL1 shRNA Plasmid (m): sc-154909-SH, UGTREL1 shRNA (h) Lentiviral Particles: sc-94212-V and UGTREL1 shRNA (m) Lentiviral Particles: sc-154909-V.

Molecular Weight of UGTREL1: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

#### **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) Immunofluo-rescence: 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.

#### **STORAGE**

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

# PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.