

GLT1D1 (C-14): sc-161651

BACKGROUND

GLT1D1 (glycosyltransferase 1 domain-containing protein 1) is a 346 amino acid secreted protein belonging to the glycosyltransferase 1 family. Existing as three alternatively spliced isoforms, GLT1D1 maps to human chromosome 12q24.33. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12, including hypochondrogenesis, achondrogenesis and kniest dysplasia. Noonan syndrome, which is characterized by heart and facial developmental defects and is caused by a mutant form of the PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, as well as the natural killer complex gene cluster, which encodes C-type lectin proteins that mediate the NK cell response to MHC I interaction.

REFERENCES

1. Jamieson, C.R., et al. 1994. Mapping a gene for Noonan syndrome to the long arm of chromosome 12. *Nat. Genet.* 8: 357-360.
2. Yang, W., et al. 1998. Low basal transcripts of the COL2A1 collagen gene from lymphoblasts show alternative splicing of exon 12 in the Kniest form of spondyloepiphyseal dysplasia. *Hum. Mutat. Suppl.* 1: S1-S2.
3. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
4. Kelley, J., et al. 2005. Comparative genomics of natural killer cell receptor gene clusters. *PLoS Genet.* 1: 129-139.
5. van der Burgt, I. 2007. Noonan syndrome. *Orphanet J. Rare Dis.* 2: 4.
6. Krejčí, J., et al. 2009. Genome-wide reduction in H3K9 acetylation during human embryonic stem cell differentiation. *J. Cell. Physiol.* 219: 677-687.
7. Derbent, M. 2011. A mother and son with Noonan syndrome resulting from a PTPN11 mutation. *Turk. J. Pediatr.* 53: 117.

CHROMOSOMAL LOCATION

Genetic locus: GLT1D1 (human) mapping to 12q24.33; Glt1d1 (mouse) mapping to 5 G1.2.

SOURCE

GLT1D1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GLT1D1 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-161651 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GLT1D1 (C-14) is recommended for detection of GLT1D1 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).

GLT1D1 (C-14) is also recommended for detection of GLT1D1 in additional species, including canine.

Suitable for use as control antibody for GLT1D1 siRNA (h): sc-95765, GLT1D1 siRNA (m): sc-145432, GLT1D1 shRNA Plasmid (h): sc-95765-SH, GLT1D1 shRNA Plasmid (m): sc-145432-SH, GLT1D1 shRNA (h) Lentiviral Particles: sc-95765-V and GLT1D1 shRNA (m) Lentiviral Particles: sc-145432-V.

Molecular Weight of GLT1D1 isoforms 1/2/3: 39/30/17 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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