SANTA CRUZ BIOTECHNOLOGY, INC.

GLT8D3 (K-20): sc-138947

BACKGROUND

GLT8D3 (glycosyltransferase 8 domain-containing protein 3), also known as GXYLT1 (glucoside xylosyltransferase 1), is a 440 amino acid single-pass type II membrane protein. Belonging to the glycosyltransferase 8 family, GLT8D3 is a xylosyltransferase which elongates the O-linked glucose attached to EGF-like repeats in the extracellular domain of Notch proteins by catalyzing the addition of xylose. GLT8D3 contains a short N-terminal cytoplasmic domain, followed by a transmembrane domain, a stem region and a large glycosyltransferase domain containing the conserved DxD motif. GLT8D3 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 12q12 and mouse chromosome 15 E3.

REFERENCES

1. Stoolmiller, A.C., et al. 1972. Biosynthesis of the chondroitin sulfate proteoglycan. Purification and properties of xylosyltransferase. J. Biol. Chem. 247: 3525-3532.
2. Bakker, H., et al. 2009. Functional UDP-xylose transport across the endoplasmic reticulum/Golgi membrane in a Chinese hamster ovary cell mutant defective in UDP-xylose Synthase. J. Biol. Chem. 284: 2576-2583.
3. Chen, R., et al. 2009. Glycoproteomics analysis of human liver tissue by combination of multiple enzyme digestion and hydrazide chemistry. J. Proteome Res. 8: 651-661.
4. Jafar-Nejad, H., et al. 2010. Role of glycans and glycosyltransferases in the regulation of Notch signaling. Glycobiology 20: 931-949.
5. Sethi, M.K., et al. 2010. Identification of glycosyltransferase 8 family members as xylosyltransferases acting on O-glucosylated notch epidermal growth factor repeats. J. Biol. Chem. 285: 1582-1586.
6. Takeuchi, H., et al. 2010. Role of glycosylation of Notch in development. Semin. Cell Dev. Biol. 21: 638-645.
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CHROMOSOMAL LOCATION

Genetic locus: GXYLT1 (human) mapping to 12q12; Gxylt1 (mouse) mapping to 15 E3.

SOURCE

GLT8D3 (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GLT8D3 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138947 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GLT8D3 (K-20) is recommended for detection of GLT8D3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GLT8D1, GLT8D2 or GLT8D4.

GLT8D3 (K-20) is also recommended for detection of GLT8D3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GLT8D3 siRNA (h): sc-95759, GLT8D3 siRNA (m): sc-145438, GLT8D3 shRNA Plasmid (h): sc-95759-SH, GLT8D3 shRNA Plasmid (m): sc-145438-SH, GLT8D3 shRNA (h) Lentiviral Particles: sc-95759-V and GLT8D3 shRNA (m) Lentiviral Particles: sc-145438-V.

Molecular Weight of GLT8D3 isoform 1: 51 kDa.

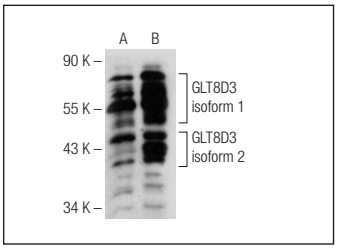
Molecular Weight of GLT8D3 isoform 2: 47 kDa.

Positive Controls: GLT8D3 (h): 293T Lysate: sc-113763.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GLT8D3 (K-20): sc-138947. Western blot analysis of GLT8D3 expression in non-transfected: sc-117752 (**A**) and human GLT8D3 transfected: sc-113763 (**B**) 293T 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.