SANTA CRUZ BIOTECHNOLOGY, INC.

EXTL3 (H-300): sc-134991

BACKGROUND

EXTL3 (exostosin-like 3), also known as Reg receptor, EXT-related protein 1 (EXTR1) or glucuronyl-galactosyl-proteoglycan 4αN-acetylglucosaminyltransferase, is a member of the EXT (hereditary multiple exostosin) gene family of tumor suppressors encoding glycosyltransferases involved in heparan sulfate (HS) biosynthesis. Within this family, the C-terminus is conserved between all members from *C. elegans* to vertebrates. EXTL3 is a ubiquitously expressed, developmentally regulated, single-pass type II membrane protein that localizes to the endoplasmic reticulum membrane. EXTL3 adds N-acetylglucosamine (GlcNAc) to the polysaccharide-protein linkage region and to the growing HS chain suggesting that it plays a role in both the initiation and elongation of HS chains. In addition, EXTL3 may act as a Reg receptor, binding Reg via its N-terminus.

REFERENCES

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2. Kobayashi, S., et al. 2000. Identification of a receptor for reg (regenerating gene) protein, a pancreatic β cell regeneration factor. J. Biol. Chem. 275: 10723-10726.
3. Kim, B.T., et al. 2001. Human tumor suppressor EXT gene family members EXTL1 and EXTL3 encode α1,4-N-acetylglucosaminyltransferases that likely are involved in heparan sulfate/ heparin biosynthesis. Proc. Natl. Acad. Sci. USA 98: 7176-7181.
4. Mizuno, K., et al. 2001. Overexpression of EXTL3/EXTR1 enhances NFκB activity induced by TNFα. Cell. Signal. 13: 125-130.
5. Osman, N.M., et al. 2003. α1,4-N-acetylglucosaminyltransferase encoding gene EXTL3 expression pattern in mouse adult and developing tissues with special attention to the pancreas. Anat. Embryol. 207: 333-341.
6. Lee, J.S., et al. 2004. Axon sorting in the optic tract requires HSPG synthesis by EXTL2 (dackel) and EXTL3 (boxer). Neuron 44: 947-960.
7. Osman, N.M., et al. 2004. Glycosyltransferase encoding gene EXTL3 is differentially expressed in the developing and adult mouse cerebral cortex. Brain Res. Dev. Brain Res. 151: 111-117.
8. Izumikawa, T., et al. 2006. Heparan sulfate polymerization in *Drosophila*. J. Biol. Chem. 281: 1929-1934.
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CHROMOSOMAL LOCATION

Genetic locus: EXTL3 (human) mapping to 8p21.1; Extl3 (mouse) mapping to 14 D1.

SOURCE

EXTL3 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EXTL3 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.

APPLICATIONS

EXTL3 (H-300) is recommended for detection of EXTL3 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).

EXTL3 (H-300) is also recommended for detection of EXTL3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for EXTL3 siRNA (h): sc-105342, EXTL3 siRNA (m): sc-144987, EXTL3 shRNA Plasmid (h): sc-105342-SH, EXTL3 shRNA Plasmid (m): sc-144987-SH, EXTL3 shRNA (h) Lentiviral Particles: sc-105342-V and EXTL3 shRNA (m) Lentiviral Particles: sc-144987-V.

Molecular Weight of EXTL3: 105 kDa.

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.

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.

PROTOCOLS

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