

EXTL1 (T-12): sc-137457

BACKGROUND

EXTL1 (exostosin-like 1), also known as glucuronosyl-N-acetylglucosaminyl-proteoglycan 4- α -N-acetylglucosaminyltransferase or multiple exostosin-like protein, is a 676 amino acid single-pass type II membrane protein that localizes to the Endoplasmic reticulum membrane. Belonging to the glycosyltransferase 47 family, EXTL1 is highly homologous to family members EXTL2 and EXTL3, all of which may be potential candidates for mutations resulting in the development of benign multiple cartilagenous bone tumors, or exostoses. EXTL1 may have catalytic activity, acting as a glycosyltransferase essential for chain polymerization of heparan sulfate and heparin. The gene encoding EXTL1 maps to human chromosome 1p36.11; this region has been linked to a range of diseases including breast carcinoma, colorectal cancer and neuroblastoma.

REFERENCES

1. Wise, C.A., et al. 1997. Identification and localization of the gene for EXTL, a third member of the multiple exostoses gene family. *Genome Res.* 7: 10-16.
2. Van Hul, W., et al. 1998. Identification of a third EXT-like gene (EXTL3) belonging to the EXT gene family. *Genomics* 47: 230-237.
3. Wuyts, W., et al. 1999. Refined physical mapping and genomic structure of the EXTL1 gene. *Cytogenet. Cell Genet.* 86: 267-270.
4. Stickens, D., et al. 2000. EXT genes are differentially expressed in bone and cartilage during mouse embryogenesis. *Dev. Dyn.* 218: 452-464.
5. Spieker, N., et al. 2000. An integrated 5-Mb physical, genetic, and radiation hybrid map of a 1p36.1 region implicated in neuroblastoma pathogenesis. *Genes Chromosomes Cancer* 27: 143-152.
6. Mathysen, D., et al. 2001. Assignment of the mouse Extl1 gene to the distal part of chromosome 4 by *in situ* hybridization and radiation hybrid mapping. *Cytogenet. Cell Genet.* 92: 162-163.
7. Kim, B.T., et al. 2001. Human tumor suppressor EXT gene family members EXTL1 and EXTL3 encode α 1,4- N-acetylglucosaminyltransferases that likely are involved in heparan sulfate/heparin biosynthesis. *Proc. Natl. Acad. Sci. USA* 98: 7176-7181.
8. Hall, C.R., et al. 2002. Reevaluation of a genetic model for the development of exostosis in hereditary multiple exostosis. *Am. J. Med. Genet.* 112: 1-5.
9. Zak, B.M., et al. 2002. Hereditary multiple exostoses and heparan sulfate polymerization. *Biochim. Biophys. Acta* 1573: 346-355.

CHROMOSOMAL LOCATION

Genetic locus: EXTL1 (human) mapping to 1p36.11; Extl1 (mouse) mapping to 4 D3.

SOURCE

EXTL1 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EXTL1 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-137457 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EXTL1 (T-12) is recommended for detection of EXTL1 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); non cross-reactive with EXTL2 or EXTL3.

EXTL1 (T-12) is also recommended for detection of EXTL1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for EXTL1 siRNA (h): sc-88349, EXTL1 siRNA (m): sc-144986, EXTL1 shRNA Plasmid (h): sc-88349-SH, EXTL1 shRNA Plasmid (m): sc-144986-SH, EXTL1 shRNA (h) Lentiviral Particles: sc-88349-V and EXTL1 shRNA (m) Lentiviral Particles: sc-144986-V.

Molecular Weight of EXTL1: 75 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.

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.