

LEPREL2 (T-20): sc-243253

BACKGROUND

LEPREL2 (leprecan-like protein 2), also known as P3H3 (prolyl 3-hydroxylase 3) or protein B, is a 736 amino acid protein belonging to the leprecan family, a family of collagen prolyl hydroxylases required for proper collagen biosynthesis, folding and assembly. LEPREL2 contains one Fe2OG dioxygenase domain and four TPR repeats. LEPREL2 has prolyl 3-hydroxylase activity catalyzing the post-translational formation of 3-hydroxyproline in -Xaa-Pro-Gly-sequences in collagens, especially types IV and V. Localized in the endoplasmic reticulum, LEPREL2 is weakly expressed in heart, lung, ovary and skeletal muscle. Two isoforms of LEPREL2 are produced by alternative splicing events. The gene encoding LEPREL2 maps to human chromosome 12p13.31 and mouse chromosome 6 F2.

REFERENCES

1. Ansari-Lari, M.A., Muzny, D.M., Lu, J., Lu, F., Lilley, C.E., Spanos, S., Malley, T. and Gibbs, R.A. 1996. A gene-rich cluster between the CD4 and triosephosphate isomerase genes at human chromosome 12p13. *Genome Res.* 6: 314-326.
2. Järnum, S., Kjellman, C., Darabi, A., Nilsson, I., Edvardsen, K. and Aman, P. 2004. LEPREL1, a novel ER and Golgi resident member of the Lepreca family. *Biochem. Biophys. Res. Commun.* 317: 342-351.
3. Vranka, J.A., Sakai, L.Y. and Bächinger, H.P. 2004. Prolyl 3-hydroxylase 1, enzyme characterization and identification of a novel family of enzymes. *J. Biol. Chem.* 279: 23615-23621.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610342. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/610342>
5. Marini, J.C., Cabral, W.A., Barnes, A.M. and Chang, W. 2007. Components of the collagen prolyl 3-hydroxylation complex are crucial for normal bone development. *Cell Cycle* 6: 1675-1681.
6. Shah, R., Smith, P., Purdie, C., Quinlan, P., Baker, L., Aman, P., Thompson, A.M. and Crook, T. 2009. The prolyl 3-hydroxylases P3H2 and P3H3 are novel targets for epigenetic silencing in breast cancer. *Br. J. Cancer* 100: 1687-1696.

CHROMOSOMAL LOCATION

Genetic locus: LEPREL2 (human) mapping to 12p13.31; Leprel2 (mouse) mapping to 6 F2.

SOURCE

LEPREL2 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LEPREL2 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-243253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LEPREL2 (T-20) is recommended for detection of LEPREL2 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 LEPREL1.

LEPREL2 (T-20) is also recommended for detection of LEPREL2 in additional species, including canine and porcine.

Suitable for use as control antibody for LEPREL2 siRNA (h): sc-95718, LEPREL2 siRNA (m): sc-146709, LEPREL2 shRNA Plasmid (h): sc-95718-SH, LEPREL2 shRNA Plasmid (m): sc-146709-SH, LEPREL2 shRNA (h) Lentiviral Particles: sc-95718-V and LEPREL2 shRNA (m) Lentiviral Particles: sc-146709-V.

Molecular Weight of LEPREL2 isoforms 1/2: 82/62 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.

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.