

LEPREL1 (B-9): sc-377353



The Power to Question

BACKGROUND

LEPREL1 (Iprecan-like 1), also known as P3H2 (prolyl 3-hydroxylase 2 precursor) or MLAT4 (myxoid liposarcoma-associated protein 4), is a 708 amino acid protein that belongs to a family of collagen prolyl hydroxylases. LEPREL1 has a highly conserved C-terminal domain that contains critical catalytic residues found in lysyl and prolyl 4-hydroxylases, including 2 iron-binding histidines and an aspartic acid. LEPREL1 is expressed in heart, placenta, lung, liver, skeletal muscle and kidney. Expression is localized to the epithelia of bile ducts and to the sarcoplasm of heart muscle and skeletal muscle. LEPREL1 is required for proper collagen biosynthesis, folding, and assembly. LEPREL1 forms a complex with cartilage-associated protein (CRTAP) and cyclophilin B (CyPB) in the endoplasmic reticulum. This complex is responsible for 3-hydroxylation of proline residues of collagen type I, II and V, and is important for normal bone development.

REFERENCES

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- Morello, R., Bertin, T.K., Chen, Y., Hicks, J., Tonachini, L., Monticone, M., Castagnola, P., Rauch, F., Glorieux, F.H., Vranka, J., Bächinger, H.P., Pace, J.M., Schwarze, U., Byers, P.H., Weis, M., Fernandes, R.J., Eyre, D.R., Yao, Z., Boyce, B.F. and Lee, B. 2006. CRTAP is required for prolyl 3-hydroxylation and mutations cause recessive osteogenesis imperfecta. *Cell* 127: 291-304.
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- 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.
- Cheung, M.S. and Glorieux, F.H. 2008. Osteogenesis imperfecta: update on presentation and management. *Rev. Endocr. Metab. Disord.* 9: 153-160.

CHROMOSOMAL LOCATION

Genetic locus: LEPREL1 (human) mapping to 3q28.

SOURCE

LEPREL1 (B-9) is a mouse monoclonal antibody raised against amino acids 317-442 mapping within an internal region of LEPREL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

LEPREL1 (B-9) is recommended for detection of LEPREL1 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for LEPREL1 siRNA (h): sc-78509, LEPREL1 shRNA Plasmid (h): sc-78509-SH and LEPREL1 shRNA (h) Lentiviral Particles: sc-78509-V.

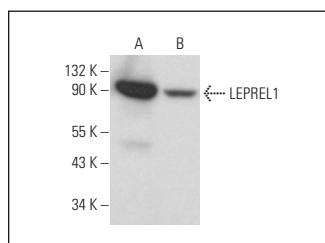
Molecular Weight of LEPREL1: 80 kDa.

Positive Controls: SW480 cell lysate: sc-2219, Hs 67 whole cell lysate or Caki-1 cell lysate: sc-2224.

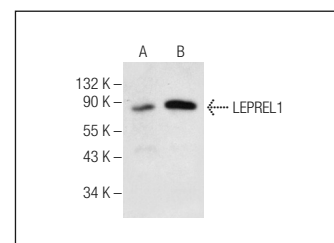
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LEPREL1 (B-9): sc-377353. Western blot analysis of LEPREL1 expression in Caki-1 (A) and SW480 (B) whole cell lysates.



LEPREL1 (B-9): sc-377353. Western blot analysis of LEPREL1 expression in Hs 67 (A), Caki-1 (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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