

# LEPREL1 (H-4): sc-377096

## 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

1. Vranka, J.A., et al. 2004. Prolyl 3-hydroxylase 1, enzyme characterization and identification of a novel family of enzymes. *J. Biol. Chem.* 279: 23615-23621.
2. Morello, R., et al. 2006. CRTAP is required for prolyl 3-hydroxylation and mutations cause recessive osteogenesis imperfecta. *Cell* 127: 291-304.
3. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610341. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Marini, J.C., et al. 2007. Components of the collagen prolyl 3-hydroxylation complex are crucial for normal bone development. *Cell Cycle* 6: 1675-1681.
5. Cheung, M.S., et al. 2008. Osteogenesis imperfecta: update on presentation and management. *Rev. Endocr. Metab. Disord.* 9: 153-160.

## CHROMOSOMAL LOCATION

Genetic locus: P3H2 (human) mapping to 3q28; P3h2 (mouse) mapping to 16 B1.

## SOURCE

LEPREL1 (H-4) 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<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LEPREL1 (H-4) is available conjugated to agarose (sc-377096 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377096 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377096 PE), fluorescein (sc-377096 FITC), Alexa Fluor® 488 (sc-377096 AF488), Alexa Fluor® 546 (sc-377096 AF546), Alexa Fluor® 594 (sc-377096 AF594) or Alexa Fluor® 647 (sc-377096 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377096 AF680) or Alexa Fluor® 790 (sc-377096 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

LEPREL1 (H-4) is recommended for detection of LEPREL1 of mouse, rat and 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 siRNA (m): sc-146708, LEPREL1 shRNA Plasmid (h): sc-78509-SH, LEPREL1 shRNA Plasmid (m): sc-146708-SH, LEPREL1 shRNA (h) Lentiviral Particles: sc-78509-V and LEPREL1 shRNA (m) Lentiviral Particles: sc-146708-V.

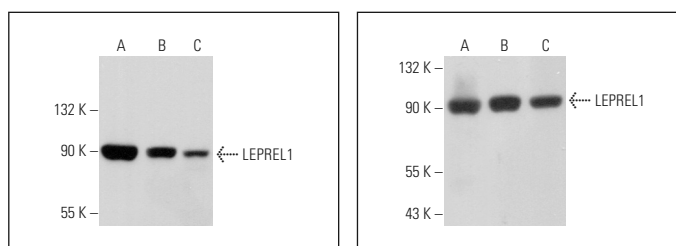
Molecular Weight of LEPREL1: 80 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, A549 cell lysate: sc-2413 or A-431 whole cell lysate: sc-2201.

## 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 (H-4): sc-377096. Western blot analysis of LEPREL1 expression in Caki-1 (A), A-431 (B) and SCC-4 (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

LEPREL1 (H-4): sc-377096. Western blot analysis of LEPREL1 expression in WI-38 (A), A549 (B) and JAR (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

## 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.

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