

# PRELP (H-127): sc-366193

## BACKGROUND

PRELP (proline/arginine-rich end leucine-rich repeat protein), also known as prolargin, MST161, SLRR2A or MSTP161, is a 382 amino acid secreted protein that localizes to the extracellular matrix. Belonging to the Class II subfamily of the small leucine-rich proteoglycan (SLRP) family, PRELP contains twelve LRR (leucine-rich) repeats, which are motifs consisting of 20-29 residues that are present in numerous proteins with diverse functions and provide versatile structural framework for the formation of protein-protein interactions. Highly expressed in cartilage, basement membranes and developing bone, PRELP is considered a glycosaminoglycan (GAG)- and collagen-binding anchor protein that associates with the basement membrane heparan sulfate proteoglycan perlecan. PRELP acts as a linker between the extracellular matrix and the cell surface of proteoglycans and may be partially responsible for Hutchinson-Gilford progeria (HGP), an extremely rare genetic disorder that causes premature, rapid aging shortly after birth.

## REFERENCES

- Grover, J., Chen, X.N., Korenberg, J.R., Recklies and A.D. and Roughley, P.J. 1996. The gene organization, chromosome location, and expression of a 55-kDa matrix protein (PRELP) of human articular cartilage. *Genomics* 38: 109-117.
- Bengtsson, E., Aspberg, A., Heinegard, D., Sommarin, Y. and Spillmann, D. 2000. The amino-terminal part of PRELP binds to heparin and heparan sulfate. *J. Biol. Chem.* 27: 40695-40702.
- Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
- Bengtsson, E., Mörgelin, M., Sasaki, T., Timpl, R., Heinegard, D. and Aspberg, A. 2002. The leucine-rich repeat protein PRELP binds perlecan and collagens and may function as a basement membrane anchor. *J. Biol. Chem.* 277: 15061-15068.
- Lewis, M. 2003. PRELP, collagen, and a theory of Hutchinson-Gilford progeria. *Ageing Res. Rev.* 2: 95-105.
- Pollex, R.L. and Hegele, R.A. 2004. Hutchinson-Gilford progeria syndrome. *Clin. Genet.* 66: 375-381.
- Malmsten, M., Davoudi, M. and Schmidtchen, A. 2006. Bacterial killing by heparin-binding peptides from PRELP and thrombospondin. *Matrix Biol.* 25: 294-300.
- Grover, J., Lee, E.R., Mounkes, L.C., Stewart, C.L. and Roughley, P.J. 2007. The consequence of PRELP overexpression on skin. *Matrix Biol.* 26: 140-143.
- Rucci, N., Rufo, A., Alamanou, M., Capulli, M., Del Fattore, A., Ahrman, E., Capece, D., Iansante, V., Zazzeroni, F., Alesse, E., Heinegard, D. and Teti, A. 2009. The glycosaminoglycan-binding domain of PRELP acts as a cell type-specific NF $\kappa$ B inhibitor that impairs osteoclastogenesis. *J. Cell Biol.* 187: 669-683.

## CHROMOSOMAL LOCATION

Genetic locus: PRELP (human) mapping to 1q32.1; Pelp (mouse) mapping to 1 E4.

## SOURCE

PRELP (H-127) is a rabbit polyclonal antibody raised against amino acids 227-353 mapping near the C-terminus of PRELP of human origin.

## PRODUCT

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

## APPLICATIONS

PRELP (H-127) is recommended for detection of PRELP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

PRELP (H-127) is also recommended for detection of PRELP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PRELP siRNA (h): sc-78776, PRELP siRNA (m): sc-152459, PRELP shRNA Plasmid (h): sc-78776-SH, PRELP shRNA Plasmid (m): sc-152459-SH, PRELP shRNA (h) Lentiviral Particles: sc-78776-V and PRELP shRNA (m) Lentiviral Particles: sc-152459-V.

Molecular Weight of PRELP: 55 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](http://www.scbt.com) or our catalog for detailed protocols and support products.