

Lubricin (H-140): sc-98454

BACKGROUND

Lubricin, also designated proteoglycan-4 or megakaryocyte stimulating factor, plays an important role in boundary lubrication within articulating joints. The disulfide-linked dimer of Lubricin, bonded between Cys 1146 and Cys 1403, is essential for protein cleavage. Highly expressed in cartilage, liver and synovial tissue, Lubricin inhibits synovial cell adhesion to the cartilage surface, but also prevents the deposition of proteins from synovial fluid into cartilage. Defects in the gene encoding for Lubricin can cause Jakobs syndrome, also designated camptodactyly-arthropathy-coxa vara-pericarditis syndrome (CACP). CACP is an autosomal recessive disorder characterized by joint failure associated with noninflammatory synoviocyte hyperplasia and subintimal fibrosis of the synovial capsule. Lubricin undergoes different levels of glycosylation and may be detected at varying molecular weights.

REFERENCES

- Schaefer, D.B., et al. 2004. Lubricin reduces cartilage-cartilage integration. *Biorheology* 41: 503-508.
- Elsaid, K.A., et al. 2005. Association of articular cartilage degradation and loss of boundary-lubricating ability of synovial fluid following injury and inflammatory arthritis. *Arthritis Rheum.* 52: 1746-1755.
- Kontinen, Y.T., et al. 2005. The microenvironment around total hip replacement prostheses. *Clin. Orthop. Relat. Res.* 430: 28-38.
- Rhee, D.K., et al. 2005. Consequences of disease-causing mutations on lubricin protein synthesis, secretion, and post-translational processing. *J. Biol. Chem.* 280: 31325-31332.
- Rhee, D.K., et al. 2005. The secreted glycoprotein lubricin protects cartilage surfaces and inhibits synovial cell overgrowth. *J. Clin. Invest.* 115: 622-631.

CHROMOSOMAL LOCATION

Genetic locus: PRG4 (human) mapping to 1q31.1; Prg4 (mouse) mapping to 1 G1.

SOURCE

Lubricin (H-140) is a rabbit polyclonal antibody raised against amino acids 1265-1404 mapping at the C-terminus of Lubricin 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.

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.

APPLICATIONS

Lubricin (H-140) is recommended for detection of Lubricin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Lubricin (H-140) is also recommended for detection of Lubricin in additional species, including bovine and porcine.

Suitable for use as control antibody for Lubricin siRNA (h): sc-60972, Lubricin siRNA (m): sc-60973, Lubricin shRNA Plasmid (h): sc-60972-SH, Lubricin shRNA Plasmid (m): sc-60973-SH, Lubricin shRNA (h) Lentiviral Particles: sc-60972-V and Lubricin shRNA (m) Lentiviral Particles: sc-60973-V.

Molecular Weight of Lubricin: 280 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.

SELECT PRODUCT CITATIONS

- Kure-Hattori, I., et al. 2012. Effect of functional shift of the mandible on lubrication of the temporomandibular joint. *Arch. Oral Biol.* 57: 987-994.
- Ni, G.X., et al. 2012. Intensity-dependent effect of treadmill running on lubricin metabolism of rat articular cartilage. *Arthritis Res. Ther.* 14: R256.

RESEARCH USE

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



Try **Lubricin (1D5): sc-293466**, our highly recommended monoclonal alternative to Lubricin (H-140).