

Lumican (H-90): sc-33785

BACKGROUND

Lumican, a member of the small leucine-rich proteoglycans (SLRPs) family of proteins, is a keratan sulfate proteoglycan present in large quantities in the corneal stroma and in interstitial collagenous matrices of the heart, aorta, skeletal muscle, skin and intervertebral discs. During collagen fibrillogenesis, Lumican regulates the assembly of collagens into higher order fibrils, limiting the growth of fibrils in diameter. Lumican is present in the extracellular matrix of human articular cartilage at all ages, with a far greater abundance in the adult. Human Lumican maps to chromosome 12q21.33.

REFERENCES

1. Chakravarti, S., et al. 1995. Primary structure of human Lumican (keratan sulfate proteoglycan) and localization of the gene (LUM) to chromosome 12q21.3-q22. *Genomics* 3: 481-488.
2. Grover, J., et al. 1995. The human Lumican gene. Organization, chromosomal location, and expression in articular cartilage. *J. Biol. Chem.* 37: 21942-21949.
3. Chakravarti, S., et al. 1995. Localization of mouse Lumican (keratan sulfate proteoglycan) to distal chromosome 10. *Mamm. Genome* 6: 367-368.
4. Kao, W.W., et al. 2002. Roles of Lumican and keratocan on corneal transparency. *Glycoconj. J.* 19: 275-285.
5. Chakravarti, S. 2002. Functions of Lumican and fibromodulin: lessons from knockout mice. *Glycoconj. J.* 19: 287-293.
6. Jepsen, K., et al. 2002. A syndrome of joint laxity and impaired tendon integrity in Lumican- and fibromodulin-deficient mice. *J. Biol. Chem.* 38: 35532-35540.
7. Vij, N., et al. 2005. Lumican regulates corneal inflammatory responses by modulating Fas-Fas ligand signaling. *Invest. Ophthalmol. Vis. Sci.* 46: 88-95.

CHROMOSOMAL LOCATION

Genetic locus: LUM (human) mapping to 12q21.33, FMOD (human) mapping to 1q32.1; Lum (mouse) mapping to 10 C3, Fmod (mouse) mapping to 1 E4.

SOURCE

Lumican (H-90) is a rabbit polyclonal antibody raised against amino acids 19-108 mapping near the N-terminus of Lumican 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

Lumican (H-90) is recommended for detection of precursor and mature Lumican and to a lesser extent Fibromodulin 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).

Molecular Weight of Lumican: 46 kDa.

Positive Controls: mouse placenta extract: sc-364247.

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) 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

1. Coulson-Thomas, V.J., et al. 2010. Fibroblast and prostate tumor cell cross-talk: fibroblast differentiation, TGF-β, and extracellular matrix down-regulation. *Exp. Cell Res.* 316: 3207-3226.
2. Honardoust, D., et al. 2011. Small leucine-rich proteoglycans, decorin and fibromodulin, are reduced in postburn hypertrophic scar. *Wound Repair Regen.* 19: 368-378.

RESEARCH USE

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



Try **Lumican (B-9): sc-166871**, our highly recommended monoclonal alternative to Lumican (H-90).