

Human Lumican / LUM Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 11640-H08H

General Information

Gene Name Synonym:

LDC; SLRR2D

Protein Construction:

A DNA sequence encoding the human LUM (NP_002336.1) (Met 1-Asn 338) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 19

Molecular Mass:

The recombinant human LUM consists of 331 amino acids and has a calculated molecular mass of 38 kDa. The apparent molecular mass of the protein is approximately 45-55 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

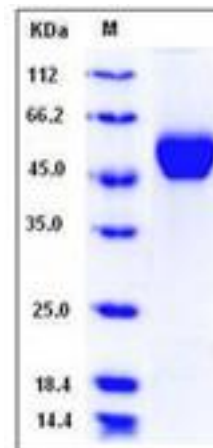
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Lumican, a prototypic leucine-rich proteoglycan with keratan sulfate side chains, is a major component of the cornea, dermal, and muscle connective tissues. In these bifunctional molecules, the protein moiety binds collagen fibrils and the highly charged hydrophilic glycosaminoglycans regulate interfibrillar spacings. Lumican is the major keratan sulfate proteoglycan of the cornea but is also distributed in interstitial collagenous matrices throughout the body. Lumican regulates collagenous matrix assembly as a keratan sulfate proteoglycan in the cornea and is also present in the connective tissues of other organs and embryonic corneal stroma as a glycoprotein. Lumican may regulate collagen fibril organization and circumferential growth, corneal transparency, and epithelial cell migration and tissue repair. Lumican expressed in injured epithelium may modulate cell behavior such as adhesion or migration, thus contributing to corneal epithelial wound healing. Lumican plays a crucial role in the regulation of collagen assembly into fibrils in various connective tissues and serve as a definitive link between a necessity for lumican in the development of a highly organized collagenous matrix and corneal transparency.

References

- 1.Saika S, *et al.* (2000) Role of lumican in the corneal epithelium during wound healing. *J Biol Chem.* 275(4): 2607-12.
- 2.Chakravarti S, *et al.* (1998) Lumican regulates collagen fibril assembly: skin fragility and corneal opacity in the absence of lumican. *J Cell Biol.* 141(5): 1277-86.
- 3.Ezura Y, *et al.* (2000) Differential expression of lumican and fibromodulin regulate collagen fibrillogenesis in developing mouse tendons. *J Cell Biol.* 151(4): 779-88.

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