

DESCRIPTION

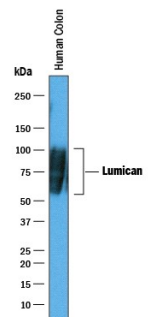
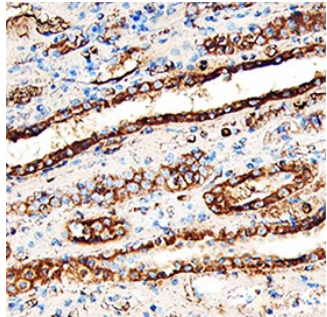
Species Reactivity	Human
Specificity	Detects human Lumican in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant mouse Lumican is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Lumican Gln19-Asn338 Accession # P51884
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p> 	<p>Detection of Human Lumican by Western Blot. Western blot shows lysates of human colon tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Lumican Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2846) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Lumican at approximately 60-85 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>Lumican in Human Kidney. Lumican was detected in immersion fixed paraffin-embedded sections of human kidney using Goat Anti-Human Lumican Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2846) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Lumican is a 40 kDa member of the family of small leucine-rich repeat proteoglycans (SLRPs) and the class II subfamily (1). Human Lumican is synthesized as a 338 amino acid (aa) precursor that contains an 18 aa signal sequence and a 320 aa mature chain. The mature chain contains a negatively charged N-terminal domain containing sulfated tyrosine and disulfide bonds, 12 leucine-rich repeats (LRRs), four potential sites of N-linked glycosylation, and a carboxyl terminal domain containing two conserved cysteines (1). Mature human Lumican is 88%, 87%, and 70% aa identical to mature mouse, rat, and chick Lumican, respectively. SLRPs constitute an important fraction of noncollagenous extracellular matrix proteins (ECM) proteins (1, 2). Lumican is expressed in a variety of tissues, including skin, artery, lung, cornea, kidney, bone, aorta, and articular cartilage (1). Lumican's role *in vivo* has been found using Lumican null mice. These mice have functional deficits including corneal opacity as well as skin and tendon fragility associated with disorganized and loosely packed collagen fibers (1, 3-6). The abnormal connective tissue phenotype seen in the Lumican null mice shows the importance of the role of Lumican in collagen fibrillogenesis (1). In addition to the control of collagen fibril assembly, Lumican has been shown to play a role in the regulation of cell proliferation (7, 8), migration (8, 9), and adhesion (9). Lumican's overexpression has been reported in carcinoid tumor, breast, colorectal, neuroendocrine, uterine cervical and pancreatic cancers (10).

References:

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