



MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis

Catalog No. PRPG-BG-M01

Anti- Biglycan (905A7)

BACKGROUND

Biglycan is a small secreted ECM proteoglycan belonging to the small leucine-rich repeat (SLRP) subfamily. It contains a central 12 LRR domain flanked by small cysteine clusters at either side. The structure of biglycan core protein is highly conserved across species; over 90% has been reported for rat, mouse, bovine and human biglycan core proteins. *

Product type	Primary antibodies
Immunogen	Purified bovine biglycan
Raised in	Mouse
Myeloma	-
Clone number	905A7
Isotype	IgG1
Host	-
Source	Hybridoma cell culture
Purification	-
Form	Liquid
Storage buffer	Supernatant supplemented with 0.05% NaN ₃
Concentration	ND
Volume	2 mL
Label	Unlabeled
Specificity	Biglycan
Cross reactivity	Human, Bovine Other species have not been tested.
Storage	Store at 4°C for short-term storage and -20°C for prolonged storage Aliquot to avoid cycles of freeze / thaw.
Other	Data Link : UniProtKB/Swiss-Prot P21810 (PGS1_HUMAN)

Application notes	IP, IHC, ELISA
Recommended dilutions	<ul style="list-style-type: none">Immunoprecipitation : 1/10 - 1/50 (intact, not chondroitinase-digested forms) Intact form, smeared band 50-250 kDa; chondroitinase-digested, band at 60-70 kDa; reacts poorly with chondroitinase digested decorinImmunohistochemistry : 1/25 - 1/100 (paraffin-embedded) MAb 905A7 stains connective ECMs of a wide range of organs and tissues. Chondroitinase ABC predigestion of the sections may enhance staining.ELISA : 1/10 - 1/150 <p>Other applications have not been tested. Optimal dilutions/concentrations should be determined by the end user.</p>

References	-
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ANTIBODY CHARACTERIZATION

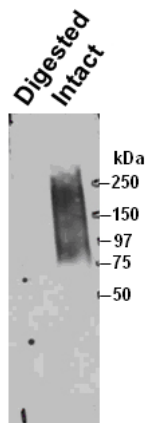


Fig.1 Immunoprecipitation of biglycan from human smooth muscle cells and Western blotting with a second anti-biglycan mAb on the intact (*right*) and chondroitinase ABC predigested (*left*) precipitate resolved by SDS-PAGE on gradient 4-18% gels.

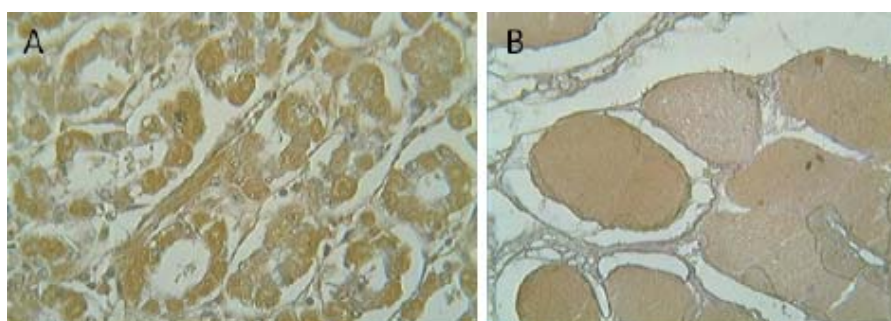


Fig.2 Immunohistochemistry on (A) human intestine and (B) human skeletal muscle.

RELATED PRODUCTS:

Product Name	Maker	Cat#
Anti Aggrecan (6F4) Monoclonal Antibody	CAC	PRPG-AG-M01
Anti Aggrecan (5D3) Monoclonal Antibody	CAC	PRPG-AG-M02
Anti Aggrecan (5G2) Monoclonal Antibody	CAC	PRPG-AG-M03
Anti Aggrecan (7B7) Monoclonal Antibody	CAC	PRPG-AG-M04
Anti Versican/CSPG2 (5C12) Monoclonal Antibody	CAC	PRPG-VS-M01
Anti Versican/CSPG2 (4C5) Monoclonal Antibody	CAC	PRPG-VS-M02
Anti NG2 / CSPG4 (2164H5) Monoclonal Antibody	CAC	PRPG-NG-M01
Anti COMP (484D1) Monoclonal Antibody	CAC	PRPG-CP-M01
Anti COMP (490D11) Monoclonal Antibody	CAC	PRPG-CP-M02
Anti Keratan sulfate (373E1) Monoclonal Antibody	CAC	PRPG-KS-M01
Anti Decorin (889C7) Monoclonal Antibody	CAC	PRPG-DC-M01
Anti Fibromodulin (636B12) Monoclonal Antibody	CAC	PRPG-FBM-M01
Anti Biglycan (905A7) Monoclonal Antibody	CAC	PRPG-BG-M01
Anti XTP1 (2191H1) Monoclonal Antibody	CAC	PRPG-XTP-M01
Anti SDP35 (2200D12) Monoclonal Antibody	CAC	PRPG-SDP-M01
Anti Laminin $\alpha 4$ (652C4) Monoclonal Antibody	CAC	PRPG-LA4-M01
Anti Collagen 12 (378D5) Monoclonal Antibody	CAC	PRPG-CO12-M01

* < BACKGROUND : Biglycan >

Biglycan is a small secreted ECM proteoglycan belonging to the small leucine-rich repeat (SLRP) subfamily. It contains a central 12 LRR domain flanked by small cysteine clusters at either side. The structure of biglycan core protein is highly conserved across species; over 90% has been reported for rat, mouse, bovine and human biglycan core proteins. Two glycosaminoglycan chains, of the chondroitin or dermatan sulfate type are attached near the amino terminus of the core protein, generating a molecule that in its fully glycanated form reaches 250 kDa. Deposition of non-glycanated forms of biglycan have been shown to increase in cartilage and bone ECMs with age. Similarly to decorin and fibromodulin, biglycan controls collagen fibrillogenesis and, partly through this action, it is believed to play a key role in bone mineralization and the assembly of cartilage and corneal ECMs. In fact, deletion of the biglycan gene leads to an osteoporis-like phenotype and double knockout of biglycan and fibromodulin cause severe cartilage and macular degeneration. The biglycan core protein binds BMP4 and may influence its bioactivity, especially in the context of osteoblast differentiation/maturation. This is believed to depend upon the ability of biglycan to regulate the interaction of the growth factor with its extracellular antagonist chordin. There is also evidence that biglycan may bind TGF β 1 and affect homeostasis and new formation of blood vessels. Furthermore, BGN may affect signal transduction during cell growth and differentiation via induction of the cyclin-dependent kinase inhibitor p27KIP1. Biglycan-induced activation of RhoA and Rac1 signaling increases migration of lung fibroblasts. Moreover, adenovirus-mediated gene transfer of BGN induced a fibroblastic response in the lung, indicating a role of BGN in fibrogenesis. Finally, biglycan is up-regulated during inflammation and augments this condition by contributing to Toll-like receptors 2 and 4 signaling in macrophages.

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