



MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis

Catalog No. PRPG-CP-M02

Anti- COMP (490D11) [Cartilage Oligomeric Matrix Protein]

BACKGROUND

COMP - Cartilage oligomeric matrix protein - is a prominent multidomain glycoprotein of cartilage, accounting for up to 1% of the wet weight of articular tissues and having an approximate Mr of 97 kDa. COMP may also be found in tendon, bone (i.e. osteoblasts), ligament, certain smooth muscles and synovium. In the ECM COMP is present in a pentameric, disulfide-bonded complex of an Mr of about 550 kDa.. *

Product type	Primary antibodies
Immunogen	Native COMP purified from human articular cartilage
Rased in	Rat
Myeloma	-
Clone number	490D11
Isotype	IgG1
Host	-
Source	Hybridoma cell culture
Purification	-
Form	Liquid
Storage buffer	Supernatant supplemented with 0.05% NaN3
Concentration	ND
Volume	2 mL
Label	Unlabeled
Specificity	COMP (Cartilage Oligomeric Matrix Protein)
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 P49747 (COMP_HUMAN)

Application notes	WB, IHC(P), ICC, IP, ELISA
Recommended dilutions	<ul style="list-style-type: none">• Western blotting, 1/20 - 1/70 (primary band at 97 kDa and a band at ~500 kDa under non-reducing conditions)• Immunohistochemistry, 1/20 - 1/75 (frozen and paraffin-embedded sections) *• ELISA, 1/10 - 1/200 <p>*<Staining Pattern> Antibody 490D11 strongly stains inter-territorial layers and territorial layers of articular cartilage and ECM of other cartilage types. It shows strongly altered staining patterns in degenerating cartilage such as osteoarthritis and rheumatoid arthritis.</p> <p>Other applications have not been tested. Optimal dilutions/concentrations should be determined by the end user.</p>

References	<ol style="list-style-type: none">1) Di Cesare, P.E., Fang, C., Leslie, M.P., Tulli, H., Perris, R., Carlson, C.S. 2000. Expression of cartilage oligomeric matrix protein (COMP) by embryonic and adult osteoblasts. <i>J. Orthopaed. Res.</i> 18, 713-720.2) Di Cesare, P., Chen, F.S., Mörgelin, M., Carlson, C.S., Leslie, M.P. Perris, R., Chang, J., Fang, C. 2002. Matrix-matrix interactions of cartilage oligomeric matrix protein and fibronectin. <i>Matrix Biol.</i> 21, 461-465
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ANTIBODY CHARACTERIZATION

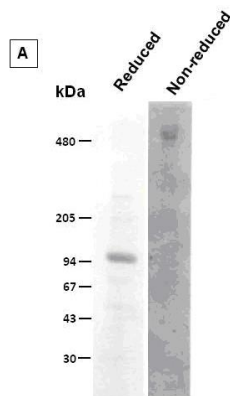


Fig.1 Western blotting of purified human COMP after SDS-PAGE on 4-15% gradient gels under reducing and non-reducing conditions

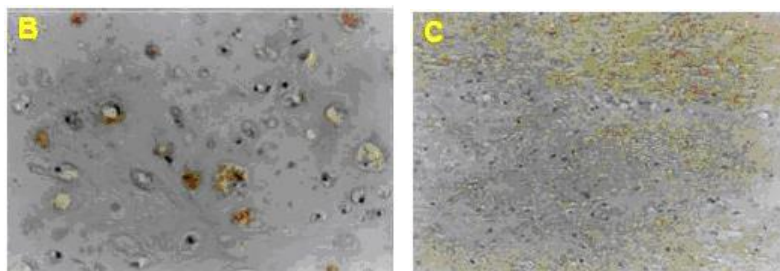


Fig.2 Immunohistochemistry on normal articular cartilage.(B)(C)

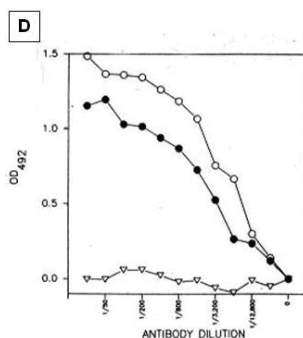


Fig.3 ELISA on purified COMP [filled circles, mAb 490D11, empty circles mAb 484D1 (Catalogue number : PRPG-CP-M01), empty triangles, control antibody] (D)

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 α 4 (652C4) Monoclonal Antibody	CAC	PRPG-LA4-M01
Anti Collagen 12 (378D5) Monoclonal Antibody	CAC	PRPG-CO12-M01

*** < BACKGROUND : COMP [Cartilage Oligomeric Matrix Protein] >**

COMP - Cartilage oligomeric matrix protein – is a prominent multidomain glycoprotein of cartilage, accounting for up to 1% of the wet weight of articular tissues and having an approximate *Mr* of 97 kDa. COMP may also be found in tendon, bone (i.e. osteoblasts), ligament, certain smooth muscles and synovium. In the ECM COMP is present in a pentameric, disulfide-bonded complex of an *Mr* of about 550 kDa. Although the function of COMP is not completely elucidated, it appears to mediate chondrocyte attachment via integrins and to stabilize the articular cartilage ECM via specific cation-dependent interactions with collagen types II and IX, aggrecan, fibronectin, and ECM protein 1. In addition, mutations in the human COMP gene have been linked to the development of pseudoachondroplasia and multiple epiphyseal dysplasia, which are autosomal-dominant forms of short-limb dwarfism. In chondrocytes of these patients, COMP remains frequently entrapped in intracellular vesicles. COMP is a substrate for a variety of ECM degrading enzymes, including MMP-1, MMP-13, MMP-19, MMP20 and ADAMTS-4, -7 and -12. Fragments of COMP have been detected in the diseased cartilage, synovial fluid, and serum of patients with knee injuries, post-traumatic and primary osteoarthritis and rheumatoid arthritis and have proposed to be diagnostic/prognostic of degenerative cartilage diseases.

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