### 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

### Raised 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.

### Data Link
UniProtKB/Swiss-Prot [P49747](http://www.uniprot.org/uniprot/P49747) (COMP_HUMAN)

### Application notes

### Recommended dilutions
- 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
- *

*<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.

Other applications have not been tested.

Optimal dilutions/concentrations should be determined by the end user.

### References
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:

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Maker</th>
<th>Cat#</th>
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<td>PRPG-AG-M01</td>
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<td>Anti Collagen 12 (378D5) Monoclonal Antibody</td>
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**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.