



## Cartilage Oligomeric Matrix Protein Human CHO

### Product Data Sheet

**Type:** Recombinant

**Source:** CHO

**Species:** Human

**Other names:** COMP, Thrombospondin-5, TSP5

**Cat. No.:**

RGB002

(0.1 mg)

### Description

Total 783 AA. MW: 85.75 kDa (calculated). C-Terminal His-tag+myc-epitope

### Introduction to the Molecule

Cartilage oligomeric matrix protein (COMP), also designated thrombospondin 5 (TSP 5), is non-collagenous glycoprotein and is a member of the thrombospondin family of extracellular proteins. COMP is a calcium-binding protein of high molecular weight (>500kDa) present in the extracellular matrix of articular, nasal and tracheal cartilage. COMP is not only cartilage-derived but was found widely in other tissues, including synovium and tendon. Intact COMP is pentameric, with five identical subunits and the carboxy-terminal globular domain of native COMP binds to collagens I, II, and IX. It has been proposed that COMP molecules are important for maintaining the properties and integrity of collagen network. In addition COMP may have a storage and delivery function for hydrophobic cellsignaling molecules such as vitamin D. The significance of COMP for normal development and function of cartilage has been underscored by the discovery that mutations of the COMP gene result in pseudoachondro-plasia and some forms of multiple epiphyseal dysplasia. Most published studies have shown that serum levels of COMP provide important information about metabolic changes occurring in the cartilage matrix in joint disease. These studies describe that serum COMP level correlated with cartilage degradation and is a potential prognostic marker in inflammatory joint diseases such as osteoarthritis (OA) and rheumatoid arthritis (RA). Results have demonstrated an association of increasing serum COMP levels with progressive destruction of articular cartilage monitored radiographically. OA and RA are a common disease causing pain and disability in a significant proportion of the adult population and early diagnostics of these diseases is very important for future therapy.

### Research topic

Bone and cartilage metabolism

### Amino Acid Sequence

AAQPARRAVR SFCVLLLTTLA ALGASGQGQS PLGSDLGPQM LRELQETNAA LQDVRELLRQ QVREITFLKN TVMECDACGM  
QQSVRTGLPS VRPLLHCAPG FCFPGVACIQ TESGARCGPC PAGFTGNGSH CTDVNECNAH PCFPRVRCIN TSPGFRCEAC  
PPGYSGPETHQ GVGLAFKAN KQVCTDINEC ETGQHNCVNP SVCINTRGSF QCGPCQPGFV GDQASGCQRR AQRFCPDGSP  
SECHEHADCY LERDGSRSV CAVGWAGNGI LCGRDIDLGD FPDKLRCP E RQCRKDNCVT VPNSGQEDVD RDGIGDACDP  
DADGDGVPE KDNCPVLRNP DQRNTDEKDW GDACDNCRSQ KNDDQKDTDQ DGRGDACDDD IDGDRIRNQA DNCPRVPNSD  
QKDSGDGIG DACDNCQKS NPDQADVHD FVGDACDSQ DQDGDGHQDS RDNCPTVPNS AQEDSDHDGQ GDACDDDDN  
DGVPSRDNC RLVPNPGQED ADRDGVGDVC QDDFDADKVV DKIDVCPENA EVTLTDFRAF QTVVLDPEGD AQIDPNWVVL  
NQGREIVQTM NSDPGLAVGY TAFNGVDFEG TFHVNTVTD DYAGFIFGYQ DSSSFYVVMW KQMEQTYWQA NPFRAVAEPG  
IQLKAVKSST GPGEQLRNAL WHTGDTESQV RLLWKDPRNV GWKDKKSYRW FLQHRPQVGY IRVRFYEGPE LVADSNVVDL  
TTMRGGRLGV FCFSQENIIW ANLRYRCNDT IPEDYETARG GP **EQKLISEE** **DLNSAVDHHH** **HHH**

### Source

CHO

### Formulation

Frozen in production medium.

### Reconstitution

Defrost at ambient temperature.

### Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

**Storage, Stability/Shelf Life**

Store frozen at -20 °C. Stable until expiry date.

**Quality Control Test**

SDS-PAGE, ELISA test

**Applications**

Drug discovery, In vitro diagnostic