

## Product datasheet

# Recombinant Human COMP protein ab124873

### Overview

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<b>Product name</b>	Recombinant Human COMP protein
<b>Protein length</b>	Full length protein

### Description

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<b>Nature</b>	Recombinant
<b>Source</b>	HEK 293 cells

### Amino Acid Sequence

**Accession** [P49747](#)

**Species** Human

**Sequence** **HVDYKDDDDK**PAGQGQSPLGSDLGPQMLRELQETNAALQDVRELLRQQVR  
 EITFLKNTVMECDACGMQQSVRTGLPSVRPQGQSPLGSDLGPQMLRELQE  
 TNAALQDVRELLRQQVREITFLKNTVMECDACGMQQSVRTGLPSVRPLH  
 CAPGFCFPGVACIQTESGARCGPCPAGFTGNGSHCTDVNECNAHPCFPRV  
 RCINTSPGFRCEACPPGYSGPTHQGVGLAFKANKQVCTDINECETGQHN  
 CVPNSVCINTRGSFQCGPCQPGFVGDQASGCQRRARFCPDGSPSECEHH  
 ADCVLERDGSRSCVCAVWAGNGILCGRDLDGFPDEKLRCPERQCRKD  
 NCVTVPNSGQEDVDRDGIGDADPDADGDGVPNEKDNCPLVRNPQQRNTD  
 EDKWGDACDNCRSQKNDDQKDTDQDGRGDACDDDDIDGDRIRNQADNCPRV  
 PNSDQKDSGDGIGDADNCPQKSNPDQADVDHDFVGDACDSDQDQDGDG  
 HQDSRDNCPTVPNSAQEDSDHDGQGDACDDDDNDGVPDSRDNCRLVNP  
 GQEDADRDRGVGDVCQDDFDADKVVDKIDVCPENAEVTLTDFRAFQTVVLD  
 PEGDAQIDPNWVVLNQGREGVQTMNSDPGLAVGYTAFNGVDFEGTFHVNT  
 VTDDDYAGFIFGYQDSSSFYVVMWKQMEQTYWQANPFRAVAEPGIQLKAV  
 KSSTGPGEQLRNALWHTGDTESQVRLLWKDPRNVGWKDKKSYRWFLQHRP  
 QVGYIRVRFYEGPELVADSNVLDTTMRGGRLGVFCFSQENIIVANLRYR  
 CNDTIPEDYETHQLRQA

<b>Molecular weight</b>	82 kDa including tags
<b>Amino acids</b>	21 to 757
<b>Tags</b>	DDDDK tag N-Terminus

### Specifications

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Our [Abpromise guarantee](#) covers the use of **ab124873** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE Western blot
<b>Form</b>	Lyophilised

## Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Store at -20°C. pH: 7.50 Constituents: 0.24% Tris, 0.29% Sodium chloride
<b>Reconstitution</b>	It is recommended to add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it on cell culture. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles.

## General Info

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<b>Function</b>	May play a role in the structural integrity of cartilage via its interaction with other extracellular matrix proteins such as the collagens and fibronectin. Can mediate the interaction of chondrocytes with the cartilage extracellular matrix through interaction with cell surface integrin receptors. Could play a role in the pathogenesis of osteoarthritis. Potent suppressor of apoptosis in both primary chondrocytes and transformed cells. Suppresses apoptosis by blocking the activation of caspase-3 and by inducing the IAP family of survival proteins (BIRC3, BIRC2, BIRC5 and XIAP). Essential for maintaining a vascular smooth muscle cells (VSMCs) contractile/differentiated phenotype under physiological and pathological stimuli. Maintains this phenotype of VSMCs by interacting with ITGA7.
<b>Tissue specificity</b>	Abundantly expressed in the chondrocyte extracellular matrix, and is also found in bone, tendon, ligament and synovium and blood vessels. Increased amounts are produced during late stages of osteoarthritis in the area adjacent to the main defect.
<b>Involvement in disease</b>	Defects in COMP are the cause of multiple epiphyseal dysplasia type 1 (EDM1) [MIM:132400]. EDM is a generalized skeletal dysplasia associated with significant morbidity. Joint pain, joint deformity, waddling gait, and short stature are the main clinical signs and symptoms. EDM is broadly categorized into the more severe Fairbank and the milder Ribbing types. Defects in COMP are the cause of pseudoachondroplasia (PSACH) [MIM:177170]. PSACH is a dominantly inherited chondrodysplasia characterized by short stature and early-onset osteoarthritis. PSACH is more severe than EDM1 and is recognized in early childhood.
<b>Sequence similarities</b>	Belongs to the thrombospondin family. Contains 4 EGF-like domains. Contains 1 TSP C-terminal (TSPC) domain. Contains 8 TSP type-3 repeats.
<b>Developmental stage</b>	Present during the earliest stages of limb maturation and is later found in regions where the joints develop.
<b>Domain</b>	The cell attachment motif mediates the attachment to chondrocytes. It mediates the induction of both the IAP family of survival proteins and the antiapoptotic response. The TSP C-terminal domain mediates interaction with FN1 and ACAN.

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