Human COMP Protein (His Tag)

Catalog Number: **10173-H08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

EDM1; EPD1; MED; PSACH; THBS5; TSP5

Protein Construction:

A DNA sequence encoding the human COMP (NP_000086.2) precusor (Met 1-Ala 757) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 21

Molecular Mass:

The mature form of human COMP consists of 748 amino acids after removal of the signal peptide and predicts a molecular mass of 82.4 kDa. As a result of glycosylation, the apparent molecular mass of rhCOMP is approximately 120-130 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

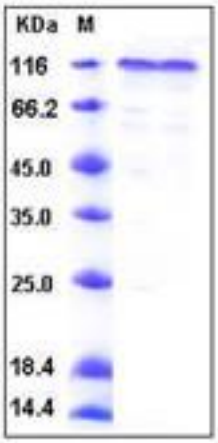
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cartilage Oligomeric Matrix Protein (COMP), also referred to as Thrombospondin-5, is a non-collagenous extracellular matrix (ECM) protein and belongs to the subgroup B of the thrombospondin protein family. This protein is expressed primarily in cartilage, ligament, and tendon, and binds to other ECM proteins such as collagen I, II and IX with high affinities depending on the divalent cations Zn2+ or Ni2+. COMP is a secreted glycoprotein that is important for growth plate organization and function. It is suggested to play a role in cell growth and development, and recent studies have revealed the possible mechanism that it protects cells against death by elevating members of the IAP (inhibitor of apoptosis protein) family of survival proteins. Mutations in COMP cause two skeletal dysplasias, pseudoachondroplasia (PSACH) and multiple epiphyseal dysplasia (EDM1), and up-regulated expression of COMP are observed in rheumatoid arthritis and certain carcinomas.

References

1.Posey KL, *et al.* (2004) Role of TSP-5/COMP in pseudoachondroplasia. Int J Biochem Cell Biol. 36(6): 1005-12.
2.Chen FH, *et al.* (2005) Interaction of cartilage oligomeric matrix protein/thrombospondin 5 with aggrecan. J Biol Chem. 282(34): 24591-8.
3.Posey KL, *et al.* (2008) The role of cartilage oligomeric matrix protein (COMP) in skeletal disease. Curr Drug Targets. 9(10): 869-77.