abcam

Product datasheet

COMP/Cartilage oligomeric matrix protein peptide ab199378

Description

Product name	COMP/Cartilage oligomeric matrix protein peptide
Animal free	No
Nature	Synthetic

Specifications

Our Abpromise guarantee covers the use of **ab199378** in the following tested applications.

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

Applications	Blocking
Form	Liquid
Additional notes	This is the blocking peptide for ab128893 *- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.* *- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.* *- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.* *- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.* *- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.* This product was previously labelled as COMP

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at -20°C.

General Info

Function	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.
Tissue specificity	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.
Involvement in disease	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]. PSAC is a dominantly inherited chondrodysplasia characterized by short stature and early-onset osteoarthrosis. PSACH is more severe than EDM1 and is recognized in early childhood.
Sequence similarities	Belongs to the thrombospondin family. Contains 4 EGF-like domains. Contains 1 TSP C-terminal (TSPC) domain. Contains 8 TSP type-3 repeats.
Developmental stage	Present during the earliest stages of limb maturation and is later found in regions where the joints develop.
Domain	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.
Cellular localization	Secreted > extracellular space > extracellular matrix.

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