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Rabbit Anti-COMP antibody

SL3679R

Product Name:	COMP
Chinese Name:	软骨寡聚基质蛋白抗体
Alias:	Cartilage oligomeric matrix protein; Cartilage oligomeric matrix protein precursor; EDM 1; EDM1; EPD 1; EPD1; Epiphyseal dysplasia 1; Epiphyseal dysplasia 1 multiple; Epiphyseal dysplasia multiple 1; MED; MGC13181; MGC149768; PSACH; Pseudoachondroplasia; THBS 5; THBS5; Thrombospondin 5; Thrombospondin5.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Daniorerio
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	83kDa
Cellular localization:	Extracellular matrixSecretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human COMP:661-757/757
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a noncollagenous extracellular matrix (ECM) protein. It consists of five identical glycoprotein subunits, each with EGF-like and calcium-binding (thrombospondin-like) domains. Oligomerization results from formation of a five-stranded coiled coil and disulfides. Binding to other ECM proteins

such as collagen appears to depend on divalent cations. Mutations can cause the osteochondrodysplasias pseudochondroplasia (PSACH) and multiple epiphyseal dysplasia (MED). [provided by RefSeq, Jul 2008].

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.

Subunit:
Pentamer; disulfide-linked. Exists in a more compact conformation in the presence of calcium and shows a more extended conformation in the absence of calcium. Interacts with ITGB3, ITGA5 and FN1. Binding to FN1 requires the presence of divalent cations (Ca(2+), Mg(2+) or Mn(2+)). The greatest amount of binding is seen in the presence of Mn(2+). Interacts with MATN1, MATN3, MATN4 and ACAN. Binds heparin, heparan sulfate and chondroitin sulfate. EDTA dimishes significantly its binding to ACAN and abolishes its binding to MATN3, MATN4 and chondroitin sulfate. Interacts with collagen I, II and IX, and interaction with these collagens is dependent on the presence of zinc ions. Interacts with ADAMTS12. Interacts with ITGA7.

Subcellular Location:
Secreted, extracellular space, extracellular matrix.

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.

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.

Similarity:
Belongs to the thrombospondin family.
Contains 4 EGF-like domains.
Contains 1 TSP C-terminal (TSPC) domain.
Contains 8 TSP type-3 repeats.

SWISS:
P49747

Gene ID:
1311

Database links:

Entrez Gene: 1311Human

Entrez Gene: 12845Mouse

Entrez Gene: 25304Rat

Omim: 600310Human

SwissProt: P49747Human

SwissProt: Q9R0G6Mouse

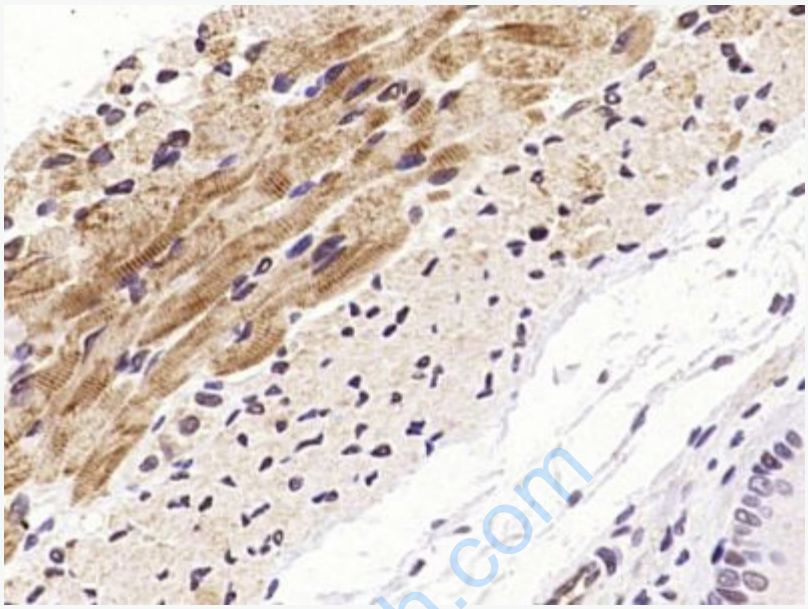
SwissProt: P35444Rat

Unigene: 1584Human

Unigene: 45071Mouse

Unigene: 10343Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:	 Paraformaldehyde-fixed, paraffin embedded (rat blood vessels); Antigen retrieval by microwave in sodium citratebuffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3%BSA) at RTfor 30min; Antibody incubation with (COMP) Polyclonal/MonoclonalAntibody, Unconjugated (SL3679R) at 1:400 overnight at 4℃,followed by conjugation to the secondary antibody (labeled with HRP)and DAB staining.