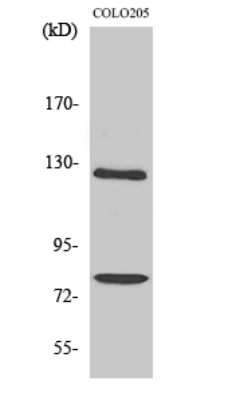
COL1A2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	COL1A2, Polyclonal Antibody
Full Product Name	COL1A2 Polyclonal Antibody
Product Gene Name	anti-COL1A2 antibody
Product Synonym Names	COL1A2; Collagen alpha-2 (I) chain; Alpha-2 type I collagen
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Molecular Weight	129,314 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (94023873..94060544). Location: 7q22.1
OMIM	120160
3D Structure	ModBase 3D Structure for P08123
Applications Tested/Suitable for anti-COL1A2 antibody	Western Blot (WB), Immunohistochemistry-Paraffin (IHC-P), Immunofluorescence (IF)
Related Product Information for anti-COL1A2 antibody	MBS9243181 is an antibody targeting COL1A2. Also known as COL1A2 Polyclonal Antibody. Reactive in Human. Host: Rabbit. Type I collagen is a member of group I collagen (fibrillar forming collagen).
Other Notes	Small volumes of anti-COL1A2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Wester Blot (WB) of anti-COL1A2 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300.
Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL1A2. It may not necessarily be applicable to this product.

NCBI GI #	48762934

NCBI GeneID	1278
NCBI Accession #	NP_000080.2
UniProt Primary Accession #	P08123
UniProt Secondary Accession #	P02464; Q13897; Q13997; Q13998; Q14038; Q14057; Q15177; Q15947; Q16480; Q16511; Q7Z5S6
UniProt Related Accession #	P08123
GenBank Nucleotide #	NM_000089.3
NCBI Official Full Name	collagen alpha-2(I) chain
NCBI Official Synonym Full Names	collagen, type I, alpha 2
NCBI Official Symbol	COL1A2
NCBI Official Synonym Symbols	OI4
UniProt Protein Name	Collagen alpha-2(I) chain
UniProt Synonym Protein Names	Alpha-2 type I collagen
Protein Family	Collagen
UniProt Gene Name	COL1A2
UniProt Entry Name	CO1A2_HUMAN
NCBI Protein Information	collagen alpha-2(I) chain; collagen alpha-2(I) chain; type I procollagen; alpha 2(I)-collagen; alpha-2 type I collagen; collagen I, alpha-2 polypeptide; collagen of skin, tendon and bone, alpha-2 chain
NCBI Summary for COL1A2	This gene encodes the pro-alpha2 chain of type I collagen whose triple helix comprises two alpha1 chains and one alpha2 chain. Type I is a fibril-forming collagen found in most connective tissues and is abundant in bone, cornea, dermis and tendon. Mutations in this gene are associated with osteogenesis imperfecta types I-IV, Ehlers-Danlos syndrome type VIIB, recessive Ehlers-Danlos syndrome Classical type, idiopathic osteoporosis, and atypical Marfan syndrome. Symptoms associated with mutations in this gene, however, tend to be less severe than mutations in the gene for the alpha1 chain of type I collagen (COL1A1) reflecting the different role of alpha2 chains in matrix integrity. Three transcripts, resulting from the use of alternate polyadenylation signals, have been identified for this gene. [provided by R. Dalgleish, Feb 2008]

UniProt Comments for COL1A2	COL1A2: Type I collagen is a member of group I collagen (fibrillar forming collagen). Defects in COL1A2 are the cause of Ehlers-Danlos syndrome type 7B (EDS7B). EDS is a connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. EDS7B is marked by bilateral congenital hip dislocation, hyperlaxity of the joints, and recurrent partial dislocations. Defects in COL1A2 are a cause of osteogenesis imperfecta type 1 (OI1). A dominantly inherited connective tissue disorder characterized by bone fragility and blue sclerae. Osteogenesis imperfecta type 1 is non-deforming with normal height or mild short stature, and no dentinogenesis imperfecta. Defects in COL1A2 are a cause of osteogenesis imperfecta type 2 (OI2); also known as osteogenesis imperfecta congenita (OIC) or lethal perinatal. A connective tissue disorder characterized by bone fragility, with many perinatal fractures, severe bowing of long bones, undermineralization, and death in the perinatal period due to respiratory insufficiency. Defects in COL1A2 are the cause of Ehlers-Danlos syndrome autosomal recessive cardiac valvular form (EDSCV). A connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. In addition to joint laxity, skin hyperextensibility and friability, and abnormal scar formation, patients have mitral valve prolapse and insufficiency, mitral regurgitation, and aortic insufficiency. Defects in COL1A2 are a cause of osteogenesis imperfecta type 3 (OI3). A connective tissue disorder characterized by progressively deforming bones, very short stature, a triangular face, severe scoliosis, grayish sclera, and dentinogenesis imperfecta. Defects in COL1A2 are a cause of osteogenesis imperfecta type 4 (OI4); also known as osteogenesis imperfecta with normal sclerae. A connective tissue disorder characterized by moderately short stature, mild to moderate scoliosis, grayish or white sclera and dentinogenesis imperfecta. A chromosomal aberration involving COL1A2 may be a cause of lipoblastomas, which are benign tumors resulting from transformation of adipocytes, usually diagnosed in children. Translocation t(7;8)(p22;q13) with PLAG1. Belongs to the fibrillar collagen family. Protein type: Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 7q22.1 Cellular Component: extracellular matrix; extracellular space; endoplasmic reticulum lumen; collagen type I; extracellular region Molecular Function: protein binding, bridging; identical protein binding; protein binding; extracellular matrix structural constituent; platelet-derived growth factor binding; metal ion binding; SMAD binding Biological Process: odontogenesis; extracellular matrix disassembly; receptor-mediated endocytosis; blood vessel development; platelet activation; collagen catabolic process; extracellular matrix organization and biogenesis; collagen fibril organization; skin morphogenesis; transforming growth factor beta receptor signaling pathway; regulation of blood pressure; blood coagulation; skeletal development; leukocyte migration; Rho protein signal transduction Disease: Ehlers-danlos Syndrome, Type Vii, Autosomal Dominant; Ehlers-danlos Syndrome, Autosomal Recessive, Cardiac Valvular Form; Osteogenesis Imperfecta, Type Ii; Osteogenesis Imperfecta, Type Iii; Osteoporosis; Osteogenesis Imperfecta, Type Iv
Research Articles on COL1A2	**1.** A spontaneous novel mutation in COL1A2 (c.1171G>A; p.Gly391Ser) causing only dentin defects and a novel mutation in PAX9 (c.43T>A; p.Phe15Ile) causing hypodontia were identified and correlated with the phenotypic presentations in the family.
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