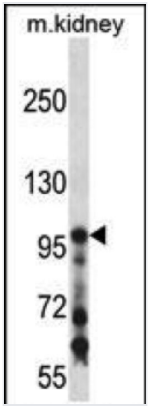
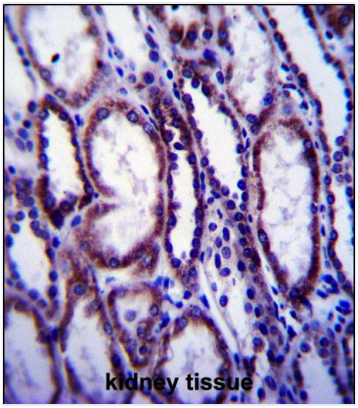
COL1A1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	COL1A1, Polyclonal Antibody
Full Product Name	COL1A1, CT (COL1A1, Collagen alpha-1(I) chain, Alpha-1 type I collagen) (AP)
Product Gene Name	anti-COL1A1 antibody
Product Synonym Names	COL1A1; Collagen alpha-1(I) chain; Alpha-1 type I collagen
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified by Protein A and Peptide Affinity Chromatography.
Specificity	Recognizes human COL1A1. Species Crossreactivity: mouse
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	1464
Chromosome Location	Chromosome: 17; NC_000017.10 (48261457..48279003, complement). Location: 17q21.33
OMIM	114000
3D Structure	ModBase 3D Structure for P02452
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 1077-1106 in the C-terminal region of human COL1A1. Species sequence homology: rat, bovine, chicken
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-COL1A1 antibody	Antibodies; Collagen
Applications Tested/Suitable for anti-COL1A1 antibody	Immunohistochemistry (IHC) Paraffin, ELISA (EIA), Western Blot (WB)
Application Notes for anti-COL1A1 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-COL1A1 antibody	MBS6287625 is an antibody targeting COL1A1. Also known as COL1A1, CT (COL1A1, Collagen alpha-1(I) chain, Alpha-1 type I collagen) (AP). Reactive in Human, Mouse. Host: Rabbit.
Product References and Citations for anti-COL1A1 antibody	1. Blades, H.Z., et al. Bone 47(5):989-994(2010). 2. Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010). 3. Jin, H., et al. Osteoporos Int (2010). 4. Szczesny, G., et al. Arch Orthop Trauma Surg (2010). 5. Cheung, M.S., et al. J. Bone Miner. Res. (2010).
Other Notes	Small volumes of anti-COL1A1 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.



Western Blot (WB) of anti-COL1A1 antibody
Western Blot analysis in mouse kidney tissue lysates (35ug/lane) usingMBS647598. This demonstrates that MBS647598 detected the COL1A1 protein (arrow).



Immunohistochemistry (IHC) of anti-COL1A1 antibody
Immunohistochemistry analysis of formalin fixed and paraffin embedded human kidney tissue using MBS647598 followed by peroxidase conjugation of the secondary antibody and DAB staining. This demonstrates the use of MBS647598 for immunohistochemistry.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL1A1. It may not necessarily be applicable to this product.

NCBI GI #	110349772
NCBI GeneID	1277
NCBI Accession #	NP_000079.2
UniProt Primary Accession #	P02452
UniProt Secondary Accession #	O76045; P78441; Q13896; Q13902; Q13903; Q14037; Q14992; Q15176; Q15201; Q16050; Q59F64
UniProt Related Accession #	P02452
GenBank Nucleotide #	NM_000088.3
NCBI Official Full Name	collagen alpha-1(I) chain preproprotein
NCBI Official Synonym Full Names	collagen, type I, alpha 1
NCBI Official Symbol	COL1A1
NCBI Official Synonym Symbols	OI4
UniProt Protein Name	Collagen alpha-1(I) chain
UniProt Synonym Protein Names	Alpha-1 type I collagen
Protein Family	Collagen
UniProt Gene Name	COL1A1
UniProt Entry Name	CO1A1_HUMAN
NCBI Protein Information	collagen alpha-1(I) chain; collagen alpha-1(I) chain; alpha-1 type I collagen; pro-alpha-1 collagen type 1; collagen alpha 1 chain type I; collagen alpha-1(I) chain preproprotein; collagen of skin, tendon and bone, alpha-1 chain

UniProt Comments for COL1A1	COL1A1: Type I collagen is a member of group I collagen (fibrillar forming collagen). Defects in COL1A1 are the cause of Caffey disease (CAFFD); also known as infantile cortical hyperostosis. Caffey disease is characterized by an infantile episode of massive subperiosteal new bone formation that typically involves the diaphyses of the long bones, mandible, and clavicles. The involved bones may also appear inflamed, with painful swelling and systemic fever often accompanying the illness. The bone changes usually begin before 5 months of age and resolve before 2 years of age. Defects in COL1A1 are a cause of Ehlers-Danlos syndrome type 1 (EDS1); also known as Ehlers-Danlos syndrome gravis. EDS is a connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. EDS1 is the severe form of classic Ehlers-Danlos syndrome. Defects in COL1A1 are the cause of Ehlers-Danlos syndrome type 7A (EDS7A); also known as autosomal dominant Ehlers-Danlos syndrome type VII. EDS is a connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. EDS7A is marked by bilateral congenital hip dislocation, hyperlaxity of the joints, and recurrent partial dislocations. Defects in COL1A1 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 COL1A1 are a cause of osteogenesis imperfecta type 2 (OI2); also known as osteogenesis imperfecta congenita. 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 COL1A1 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 COL1A1 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. Genetic variations in COL1A1 are a cause of susceptibility to osteoporosis (OSTEOP); also known as involutional or senile osteoporosis or postmenopausal osteoporosis. Osteoporosis is characterized by reduced bone mass, disruption of bone microarchitecture without alteration in the composition of bone. Osteoporotic bones are more at risk of fracture. A chromosomal aberration involving COL1A1 is found in dermatofibrosarcoma protuberans. Translocation t(17;22)(q22;q13) with PDGF. Belongs to the fibrillar collagen family. Protein type: Extracellular matrix; Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 17q21.33 Cellular Component: extracellular matrix; Golgi apparatus; extracellular space; endoplasmic reticulum lumen; collagen type I; extracellular region; secretory granule Molecular Function: identical protein binding; protein binding; platelet-derived growth factor binding; metal ion binding; extracellular matrix structural constituent Biological Process: response to peptide hormone stimulus; intramembranous ossification; extracellular matrix organization and biogenesis; response to cAMP; collagen fibril organization; positive regulation of transcription, DNA-dependent; embryonic skeletal development; response to estradiol stimulus; response to corticosteroid stimulus; extracellular matrix disassembly; protein transport; sensory perception of sound; visual perception; skeletal development; collagen biosynthetic process; endochondral ossification; response to drug; blood vessel development; receptor-mediated endocytosis; platelet activation; skin morphogenesis; osteoblast differentiation; collagen catabolic process; response to hyperoxia; response to hydrogen peroxide; blood coagulation; leukocyte migration; positive regulation of cell migration Disease: Osteogenesis Imperfecta, Type I; Ehlers-danlos Syndrome, Type Vii, Autosomal Dominant; Osteogenesis Imperfecta, Type Ii; Ehlers-danlos Syndrome, Type I; Osteogenesis Imperfecta, Type Iii; Osteoporosis; Caffey Disease; Osteogenesis Imperfecta, Type Iv
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