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Rabbit Anti-Collagen I antibody

SL0578R

Product Name:	Collagen I
Chinese Name:	I型Collagen protein/Collagen protein1/1型Collagen protein/I型胶原
Alias:	Collagen type I; Alpha 1 type I collagen; Alpha 2 type I collagen; COL1A1; COL1A2; Collagen I alpha 1 polypeptide; Collagen I alpha 2 polypeptide; Collagen Of Skin Tendon And Bone; Collagen Type 1; Collagen type I alpha 1; Collagen type I alpha 2; OI4; Osteogenesis Imperfecta Type IV; Pro alpha 1(I) collagen; Type I procollagen; CO1A1_HUMAN; Collagen alpha-1(II) chain; Alpha-1 type II collagen; Collagen alpha-1(II) chain; Chondrocalcin; collagen alpha-1(I) chain preproprotein; Collagen Ⅰ.
文献引用 PubMed :	**Specific References(14)**|SL0578R has been referenced in 14 publications. **[IF=7.70]**Yang, Fan, et al. "Strontium enhances osteogenic differentiation of mesenchymal stem cells and in vivo bone formation by activating Wnt/catenin signaling." Stem Cells 29.6 (2011): 981-991.**Human, Rat**. PubMed:21563277 **[IF=3.82]**Luo, Yang, et al. "Alendronate Retards the Progression of Lumbar Intervertebral Disc Degeneration in Ovariectomized Rats." Bone (2013).**IHC-P;Rat**. PubMed:23500174 **[IF=3.61]**Xu, Zhen E., et al. "Inflammatory stress exacerbates lipid-mediated renal injury in ApoE/CD36/SRA triple knockout mice." American Journal of Physiology-Renal Physiology 301.4 (2011): F713-F722.**IHC-P;Mouse**. PubMed:21795641 **[IF=3.55]**Guo, Hong-Feng, et al. "Piezoelectric PU/PVDF electrospun scaffolds for wound healing applications." Colloids and Surfaces B: Biointerfaces (2012).**WB;Mouse**. PubMed:22503631

[IF=1.97]Zhang, Qiang-Ye, et al. "Administration of a novel penicillamine-bound membrane: a preventive and therapeutic treatment for abdominal adhesions." BMC surgery 11.1 (2011): 5.**Rat**.

PubMed:21349198

[IF=2.16]Zhou, Nan, et al. "Involvement of Imperatorin Derivative-OW1 in the antihypertensive effect and vascular remodeling of renovascular hypertension rats." Clinical and Experimental Pharmacology and Physiology (2014).**IHC-P;Rat**.

PubMed:24798462

[IF=4.45]Wang, Chen-Chie, et al. "Expandable Scaffold Improves Integration of Tissue Engineered Cartilage: An In Vivo Study in A Rabbit Model." Tissue Engineering ja (2016).**IHC-P;Rabbit**.

PubMed:27193498

[IF=1.93]Gao, Yuanyuan, et al. "TGF-β1 promotes bovine mammary fibroblast proliferation through the ERK 1/2 signalling pathway." Cell biology international (2016).**IHC-P;Bovine**.

PubMed:27063575

[IF=2.07]Chen, Cheng, et al. "Effects of Cytoskeleton Modulation on the Phenotype of Articular Chondrocytes in Monolayer and Pellet Culture." Journal of Biomaterials and Tissue Engineering 5.12 (2015): 942-950.**IHC-P;Rabbit**.

PubMed:24116978

[IF=0.68]?akir-?zkan, Nilüfer, et al. "Therapeutic Effects of Sildenafil on Experimental Mandibular Fractures." Journal of Craniofacial Surgery 27.3 (2016): 615-620.**IHC-P;Rat**.

PubMed:27046469

[IF=3.42]Cecen, Berivan, et al. "Biocompatibility and biomechanical characteristics of loofah based scaffolds combined with hydroxyapatite, cellulose, poly-l-lactic acid with chondrocyte-like cells." Materials Science and Engineering: C(2016).**IHC;Human**.

PubMed:27612733

[IF=1.68]Ren, Xiang, et al. "Engineering zonal cartilage through bioprinting collagen type II hydrogel constructs with biomimetic chondrocyte density gradient."BMC Musculoskeletal Disorders 17.1 (2016): 1.**IHC-P;Rabbit**.

PubMed:27439428

[IF=1.28]Tian, Fa?Ming, et al. "Orally administered simvastatin partially preserves

	lumbar vertebral bone mass but not integrity of intervertebral discs in ovariectomized rats." Experimental and Therapeutic Medicine.**IHC-P;Rat**. PubMed:28450913 **[IF=2.79]**Yang, Ning, et al. "Caffeic acid phenethyl ester up-regulates antioxidant levels in hepatic stellate cell line T6 via an Nrf2-mediated mitogen activated protein kinases pathway." World J Gastroenterol 23.7 (2017): 1203-1214.**WB;Rat**. PubMed:28275300
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Cow,Horse,Rabbit,Sheep,
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:	130kDa
Cellular localization:	Extracellular matrixSecretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Collagen I C-terminal propeptide:1321-1400/1464
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:	This gene encodes the pro-alpha1 chains 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 VIIA, Ehlers-Danlos syndrome Classical type, Caffey Disease and idiopathic osteoporosis. Reciprocal translocations between chromosomes 17 and 22, where this gene and the gene for platelet-derived growth factor beta are located, are associated with a particular type of skin tumor called dermatofibrosarcoma protuberans, resulting from unregulated expression of the growth factor. Two transcripts, resulting from the use of alternate polyadenylation signals, have been identified for this gene. [provided by R. Dalgleish, Feb 2008]. **Function:** Type I collagen is a member of group I collagen (fibrillar forming collagen).

Subunit:
Trimers of one alpha 2(I) and two alpha 1(I) chains. Interacts with MRC2. Interacts with TRAM2.

Subcellular Location:
Secreted, extracellular space, extracellular matrix.

Tissue Specificity:
Forms the fibrils of tendon, ligaments and bones. In bones the fibrils are mineralized with calcium hydroxyapatite.

Post-translational modifications:
Proline residues at the third position of the tripeptide repeating unit (G-X-P) are hydroxylated in some or all of the chains. Proline residues at the second position of the tripeptide repeating unit (G-P-X) are hydroxylated in some of the chains.
O-linked glycan consists of a Glc-Gal disaccharide bound to the oxygen atom of a post-translationally added hydroxyl group.

DISEASE:
Defects in COL1A1 are the cause of Caffey disease (CAFFD) [MIM:114000]; 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) [MIM:130000]; 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) [MIM:130060]; 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) [MIM:166200]. 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) [MIM:166210]; 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) [MIM:259420]. 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) [MIM:166220]; 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) [MIM:166710]; 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.
Note=A chromosomal aberration involving COL1A1 is found in dermatofibrosarcoma protuberans. Translocation t(17;22)(q22;q13) with PDGF.

Similarity:
Belongs to the fibrillar collagen family.
Contains 1 fibrillar collagen NC1 domain.
Contains 1 VWFC domain.

SWISS:
P02452

Gene ID:
1277

Database links:

trez Gene: 1277Human

trez Gene: 12842Mouse

trez Gene: 100008952Rabbit

trez Gene: 29393Rat

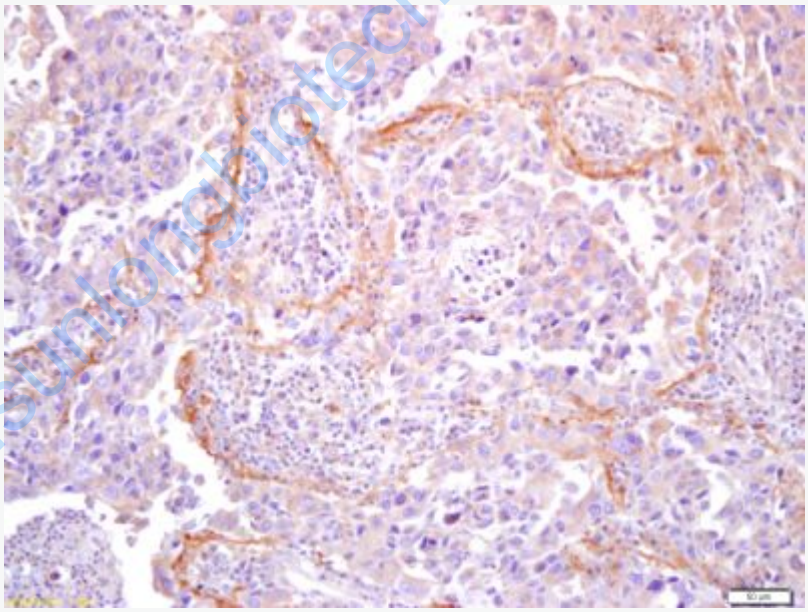
nim: 120150Human

issProt: P02453Cow

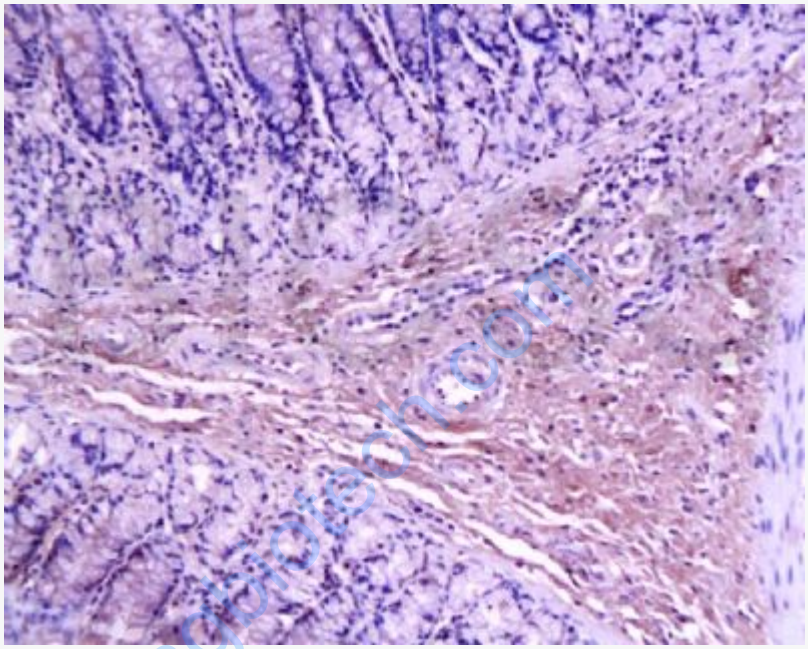
issProt: O46392Dog

issProt: P02452Human

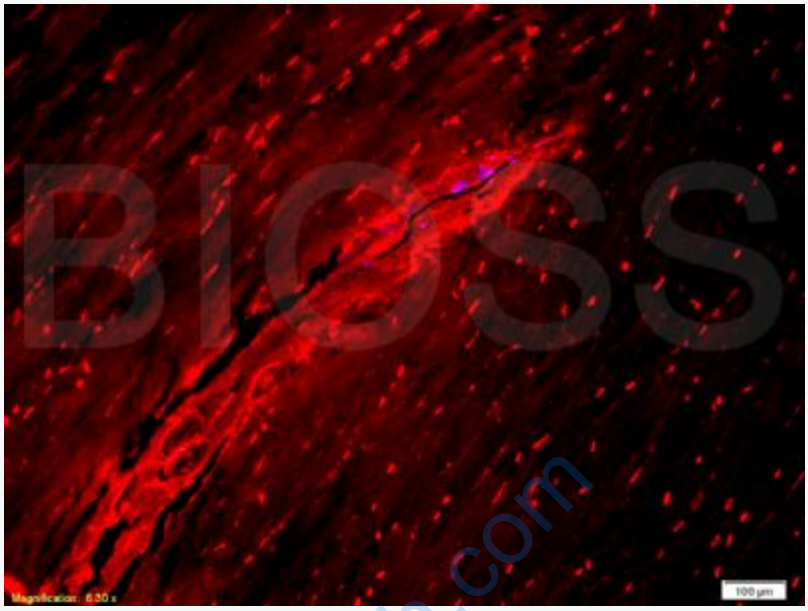
issProt: P11087Mouse

	issProt: P02454Rat igene: 172928Human igene: 277735Mouse igene: 107239Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. I型胶原是软骨基质中的一种结构蛋白 。 主要用于Ⅰ型胶原分布及变态反应方面的研究。
Picture:	 Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-Collagen I Polyclonal Antibody, Unconjugated(SL0578R) 1:200,

overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat colon tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-Collagen I Polyclonal Antibody, Unconjugated(SL0578R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rabbit meniscus tissue;4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min;

Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-Collagen I Polyclonal Antibody, Unconjugated(SL0578R) 1:300, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, PE conjugated(SL0578R)used at 1:200 dilution for 40 minutes at 37°C.

DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei