


Anti-Collagen I antibody [COL-1] ab6308

★★★★★ [33 Abreviews](#) [434 References](#) [4 Images](#)

Overview

Product name	Anti-Collagen I antibody [COL-1]
Description	Mouse monoclonal [COL-1] to Collagen I
Host species	Mouse
Tested applications	Suitable for: IHC-Fr, WB
Species reactivity	Reacts with: Human Predicted to work with: Rat, Cow, Pig, Deer 
Immunogen	Full length native protein (purified) corresponding to Cow Collagen I. Cow skin collagen type I
Epitope	The epitope recognized by the antibody may be sensitive to routine formalin fixation and paraffin embedding. There have been varying results when using this antibody in IHC-P. Please refer to our customer Abreviews for more protocol information and optimization steps when using this antibody in IHC-P.
Positive control	WB: Natural Cow Collagen I protein (ab7526), IHC-Fr: Human tonsil tissue.
General notes	<p>Production of this antibody has been changed on 23rd June 2016. The following lots are from ascites and are still in stock as of 23rd June 2016 : GR210978, GR175242, GR158374. Lot numbers higher than GR210978 will be from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.0976% Sodium azide

	Constituent: PBS
Purity	Proprietary Purification
Purification notes	Purified from Tissue culture supernatant.
Clonality	Monoclonal
Clone number	COL-1
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab6308 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★★ (2)	Use a concentration of 3.5 - 7 µg/ml. (amplification required). Use on unfixed tissue or acetone fixed tissue.
WB	★★★★★ (2)	Use a concentration of 1 - 2 µg/ml. Use under non reducing condition. Detects a band of approximately 130 kDa (predicted molecular weight: 130 kDa). The antibody is reactive with the native (non-denaturing, helical) form of collagen type I and not reactive when tested on thermally denatured molecules. Use native (non-denaturing) conditions. Positive Control: Hu stomach skin and adrenal gland tissue

Target

Function	Type I collagen is a member of group I collagen (fibrillar forming collagen).
Tissue specificity	Forms the fibrils of tendon, ligaments and bones. In bones the fibrils are mineralized with calcium hydroxyapatite.
Involvement in disease	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

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 2A (OI2A) [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.

Sequence similarities

Belongs to the fibrillar collagen family.

Contains 1 fibrillar collagen NC1 domain.

Contains 1 VWFC domain.

Post-translational modifications

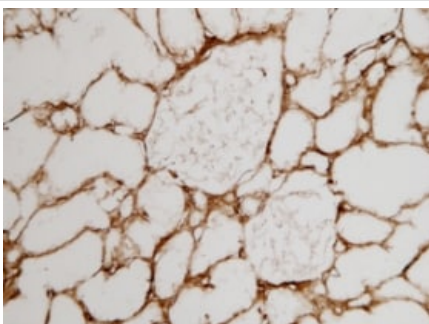
Proline residues at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains. Proline residues at the second position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some of the chains.

O-linked glycan consists of a Glc-Gal disaccharide bound to the oxygen atom of a post-translationally added hydroxyl group.

Cellular localization

Secreted > extracellular space > extracellular matrix.

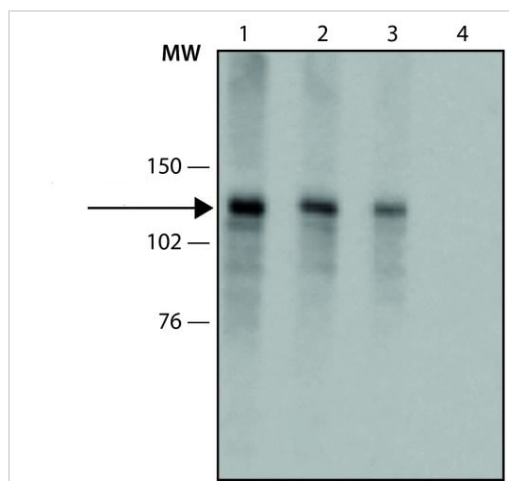
Images



Immunohistochemistry (Frozen sections) - Anti-Collagen I antibody [COL-1] (ab6308)

This image was kindly supplied as part of the review submitted by Arvi-Matti Kuusniemi

Immunoperoxidase staining of unfixed frozen tissue sections with **ab6308**. Picture of human kidney cortex showing two glomeruli and surrounding tubulointerstitium.

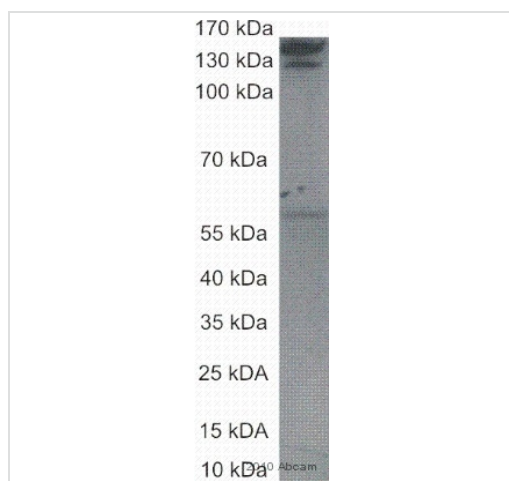


Western blot - Anti-Collagen I antibody [COL-1]
(ab6308)

Lane 1 : Anti-Collagen I antibody [COL-1] (ab6308) at 2 µg/ml
Lane 2 : Anti-Collagen I antibody [COL-1] (ab6308) at 1 µg/ml
Lane 3 : Anti-Collagen I antibody [COL-1] (ab6308) at 0.5 µg/ml
Lane 4 : Anti-Collagen I antibody [COL-1] (ab6308) at 0 µg/ml

All lanes : Recombinant human Collagen 1

Predicted band size: 130 kDa



Western blot - Anti-Collagen I antibody [COL-1]
(ab6308)

This image is courtesy of an anonymous Abreview

Anti-Collagen I antibody [COL-1] (ab6308) at 1/1000 dilution +
 Human brain whole tissue lysate at 10 µg

Secondary

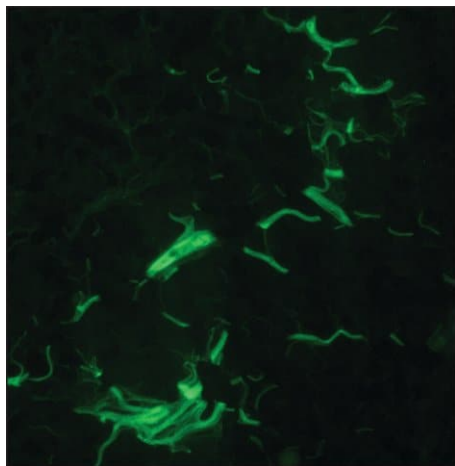
An HRP-conjugated goat polyclonal to mouse IgG at 1/7500 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 130 kDa

Exposure time: 24 hours



Acetone-fixed human tonsil tissue frozen section stained for Collagen I with ab6308 at 7 µg/mL in immunohistochemical analysis.

Immunohistochemistry (Frozen sections) - Anti-Collagen I antibody [COL-1] (ab6308)

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