




Product datasheet

Anti-Collagen I antibody ab233080

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Overview

Product name	Anti-Collagen I antibody
Description	Rabbit polyclonal to Collagen I
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human, Pig Predicted to work with: Mouse, Rat, Chicken, Cow, Dog 
Immunogen	Recombinant fragment (His-tag) corresponding to Human Collagen I aa 1200-1450. (Expressed in E.coli). Database link: P02452  Run BLAST with  Run BLAST with
Positive control	IHC-P: Human kidney tissue. WB: Recombinant human Collagen I protein; Human placenta, liver, and Pig skin lysates.
General notes	<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: 0.011% Proclin 300 Constituents: 55.77% Glycerol (glycerin, glycerine), 44.219% PBS
Purity	Immunogen affinity purified
Purification notes	ab233080 was purified by antigen-specific affinity chromatography followed by Protein A affinity chromatography.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab233080 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
WB		Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 139 kDa. Positive Control: Hu stomach, skin and adrenal gland tissue lysates. Acid or enzyme treatment with pepsin is a better method to isolate collagen. Continuous refrigeration throughout collagen extraction is important to avoid degradation and denaturation
IHC-P		Use a concentration of 5 - 20 µg/ml.

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. Osteogenesis imperfecta type 1 is non-deforming with normal height or mild short stature, and no dentinogenesis imperfecta.</p> <p>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.</p> <p>Defects in COL1A1 are a cause of osteogenesis imperfecta type 3 (OI3) [MIM:259420]. A</p>

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

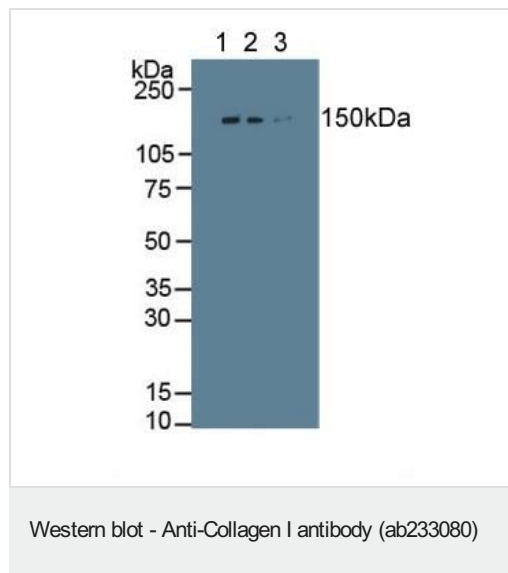
Proline residues at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains. Proline residues at the second position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some of the chains.

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



All lanes : Anti-Collagen I antibody (ab233080) at 2 µg/ml

Lane 1 : Human placenta lysate

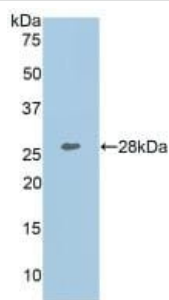
Lane 2 : Human liver lysate

Lane 3 : Pig skin lysate

Secondary

All lanes : HRP-Linked Guinea pig Anti-Rabbit at 1/2000 dilution

Predicted band size: 139 kDa



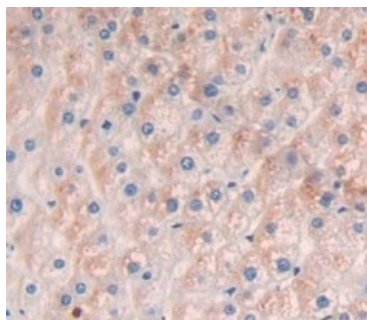
Western blot - Anti-Collagen I antibody (ab233080)

Anti-Collagen I antibody (ab233080) at 2 µg/ml + Recombinant human Collagen I protein

Secondary

HRP-Linked Guinea pig Anti-Rabbit at 1/2000 dilution

Predicted band size: 139 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Collagen I antibody (ab233080)

Formalin-fixed, paraffin-embedded human kidney tissue stained for Collagen I using ab233080 at 20 µg/ml in immunohistochemical analysis. DAB staining.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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