

Product datasheet

Mouse Pro-Collagen I alpha 1 Matched Antibody Pair Kit ab216791

Recombinant

★★★★☆ 1 Abreviews 2 Images

Overview

Product name	Mouse Pro-Collagen I alpha 1 Matched Antibody Pair Kit
Detection method	Colorimetric
Assay type	ELISA set
Sensitivity	2.25 pg/ml
Range	31.25 pg/ml - 2000 pg/ml
Species reactivity	Reacts with: Mouse
Product overview	<p>Mouse Pro-Collagen I alpha 1 Matched Antibody Pair Kits include a capture and a biotinylated detector antibody pair, along with a calibrated protein standard, suitable for sandwich ELISA. The Matched Antibody Pair Kit can be used to quantify native and recombinant mouse Pro-Collagen I alpha 1.</p> <p>Optimization of the kit reagents to sample type, immunoassay format or instrumentation may be required. Guidelines for use of this kit in a standard 96-well microplate sandwich ELISA using HRP/TMB system of colorimetric detection is described in this assay procedure for the purposes of quantification.</p> <p>Protocol information and tips on the use of the Matched Antibody Pair kits for sandwich ELISA can be found on our website. An accessory pack can be purchased which includes buffer reagents required to perform 10 x 96-well plate sandwich ELISAs (ab210905).</p> <p>For additional information on the performance of the antibody pair used in this kit, please see our equivalent SimpleStep ELISA kit ab210579. Please note that while the antibody pair is the same provided in the corresponding SimpleStep ELISA Kit, due to differences in their formulation, this antibody pair cannot be used with the consumables provided with our SimpleStep ELISA Kits.</p>
Tested applications	Suitable for: ELISA
Platform	Reagents

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

Components	5 x 96 tests
Mouse Pro-Collagen I alpha 1 Capture Antibody	1 x 50µg
Mouse Pro-Collagen I alpha 1 Detector Antibody	1 x 12.5µg
Mouse Pro-Collagen I alpha 1 Lyophilized Protein	1 vial

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

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 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 involutinal 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.

Applications

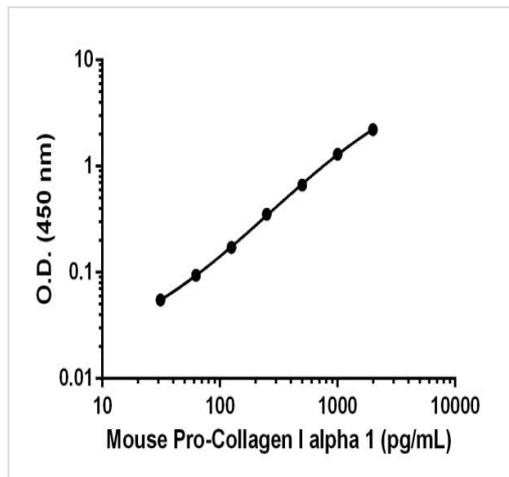
The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab216791 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
ELISA		Use at an assay dependent concentration.

Images



Standard calibration curve. Background subtracted values are graphed.

Mouse Pro-Collagen I alpha 1 standard curve.

Powered by
recombinant antibodies



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Mouse Pro-Collagen I alpha 1
Matched Antibody Pair Kit (ab216791)

To learn more about the advantages of recombinant antibodies see [here](#).

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

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