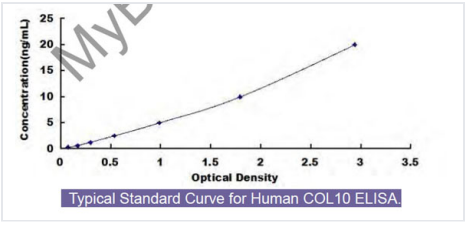
Collagen Type X (COL10) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Collagen Type X (COL10), ELISA Kit
Full Product Name	Human Collagen Type X (COL10) ELISA Kit
Product Gene Name	COL10 elisa kit
Product Synonym Names	COL10A1; COL10-A1; Schmid Metaphyseal Chondrodysplasia; Collagen Alpha-1(X)chain
Species Reactivity	Human
Assay Type	Quantitative Sandwich
Samples	Human serum, plasma, tissue homogenates or other biological fluids
Detection Range	0.312-20ng/mL
Sensitivity	< 0.141ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of COL10. No significant cross-reactivity or interference between COL10 and analogues was observed.
Preparation and Storage	For unopened kit, all reagents should be kept according to the labels on vials. The TMB Substrate, Wash Buffer, Stop Solution should be stored at 4 degree C. All others should be stored at -20 degree C.
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level COL10 were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100. Inter-Assay: CV<12%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level COL10 were tested 20 times on one plate, respectively. Intra-Assay: CV<10%
Molecular Weight	66,158 Da
OMIM	X60382 Genomic DNA
3D Structure	ModBase 3D Structure for Q03692
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for COL10 elisa kit	Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to COL10. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to COL10. Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain COL10, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450nm ± 10nm. The concentration of COL10 in the samples is then determined by comparing the O.D. of the samples to the standard curve. Intended Uses: The kit is a sandwich enzyme immunoassay for the in vitro quantitative measurement of COL10 in human serum, plasma, tissue homogenates or other biological fluids.
Other Notes	Small volumes of COL10 elisa kit 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.

Searchable Terms for COL10 purchase	MBS451027 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Collagen Type X (COL10) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing COL10. The ELISA analytical biochemical technique of the MBS451027 kit is based on COL10 antibody-COL10 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect COL10 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, COL10. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of COL10 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL10. It may not necessarily be applicable to this product.

NCBI GI #	18105032
NCBI GeneID	1300
NCBI Accession #	NP_000484.2
UniProt Primary Accession #	Q03692
UniProt Secondary Accession #	A1L4P2
UniProt Related Accession #	Q03692
GenBank Nucleotide #	NM_000493.3
NCBI Official Full Name	collagen alpha-1(X) chain
NCBI Official Synonym Full Names	collagen type X alpha 1 chain
NCBI Official Symbol	COL10A1
UniProt Protein Name	Collagen alpha-1(X) chain
Protein Family	Zinc finger protein CONSTANS
UniProt Gene Name	COL10A1
NCBI Protein Information	collagen alpha-1(X) chain
NCBI Summary for COL10	This gene encodes the alpha chain of type X collagen, a short chain collagen expressed by hypertrophic chondrocytes during endochondral ossification. Unlike type VIII collagen, the other short chain collagen, type X collagen is a homotrimer. Mutations in this gene are associated with Schmid type metaphyseal chondrodysplasia (SMCD) and Japanese type spondylometaphyseal dysplasia (SMD). [provided by RefSeq, Jul 2008]
UniProt Comments for COL10	Type X collagen is a product of hypertrophic chondrocytes and has been localized to presumptive mineralization zones of hyaline cartilage.
Research Articles on COL10	**1.** increased expression of stromal colXalpha1 and low TILs correlate with poor pathologic response in ER+/HER2+ breast tumors. Further studies are needed to confirm their predictive value and impact on long-term outcomes, and to determine whether this collagen exerts a protective effect on the cancer cells or simply reflects other factors within the tumor microenvironment

Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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