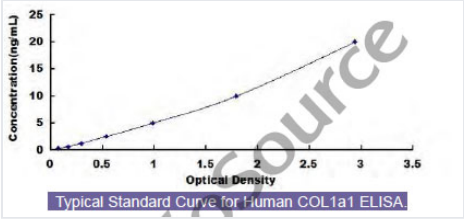
Collagen Type 1 Alpha 1 (COL1a1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Collagen Type I Alpha 1 (COL1a1), ELISA Kit
Full Product Name	Human Collagen Type I Alpha 1 (COL1a1) ELISA Kit
Product Gene Name	COL1a1 elisa kit
Species Reactivity	Human
Assay Type	Quantitative Sandwich
Samples	Serum, plasma or other biological fluids
Detection Range	0.312-20ng/mL
Sensitivity	< 0.133ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of COL1a1. No significant cross-reactivity or interference between COL1a1 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 COL1a1 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 COL1a1 were tested 20 times on one plate, respectively. Intra-Assay: CV<10%
Molecular Weight	138,941 Da
OMIM	Z74615 mRNA
3D Structure	ModBase 3D Structure for P02452
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for COL1a1 elisa kit	Intended Uses: The kit is a sandwich enzyme immunoassay for the in vitro quantitative measurement of COL1a1 in human serum, plasma or other biological fluids. Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to COL1a1. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to COL1a1. 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 COL1a1, 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 COL1a1 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of COL1a1 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 COL1a1 purchase	MBS454617 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Collagen Type I Alpha 1 (COL1a1) 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 COL1a1. The ELISA analytical biochemical technique of the MBS454617 kit is based on COL1a1 antibody-COL1a1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect COL1a1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, COL1a1. 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 COL1a1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL1a1. It may not necessarily be applicable to this product.

NCBI GI #	110349772
NCBI GeneID	1277
NCBI Accession #	NP_000079.2
UniProt Primary Accession #	P02452
UniProt Secondary Accession #	O76045; P78441; Q13896; Q13902; Q13903; Q14037; Q14992; Q15176; Q15201; Q16050; Q59F64
UniProt Related Accession #	P02452
GenBank Nucleotide #	NM_000088.3
NCBI Official Full Name	collagen alpha-1(I) chain preproprotein
NCBI Official Synonym Full Names	collagen type I alpha 1 chain
NCBI Official Symbol	COL1A1
NCBI Official Synonym Symbols	OI1; OI2; OI3; OI4; EDSC
UniProt Protein Name	Collagen alpha-1(I) chain
UniProt Synonym Protein Names	Alpha-1 type I collagen
Protein Family	Collagen
UniProt Gene Name	COL1A1
NCBI Protein Information	collagen alpha-1(I) chain
NCBI Summary for COL1a1	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]
UniProt Comments for COL1a1	Type I collagen is a member of group I collagen (fibrillar forming collagen).
Research Articles on COL1a1	**1.** Data show that all of the 4 patients from the family were detected as having carried a heterozygous missense mutation (c.4193T>G, p.I1398S) in exon 50 of the collagen type I, alpha 1 chain (COL1A1) gene.
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