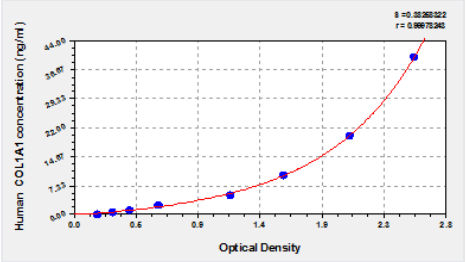
Collagen, Type I, Alpha 1 (COL1A1) ELISA Kit for Human

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
Product Synonym Names	Human collagen; type I; alpha 1 (COL1A1) ELISA kit; OI4; alpha 1 type I collagen; collagen alpha 1 chain type I; collagen of skin; tendon and bone; alpha-1 chain; pro-alpha-1 collagen type 1; collagen; type I; alpha 1
Species Reactivity	Human
Assay Type	Quantitative Sandwich
Samples	Serum, plasma, cell culture supernates, tissue homogenates
Detection Range	0.625 ng/ml-40 ng/ml
Sensitivity	< 0.156 ng/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of human COL1A1. No significant cross-reactivity or interference between human COL1A1 and analogues was observed.
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.
Inter-assay Precision	Inter-assay Precision (Precision between assays): CV%<10%. Three samples of known concentration were tested in twenty assays to assess.
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV%<8%. Three samples of known concentration were tested twenty times on one plate to assess.
Molecular Weight	138,941 Da
OMIM	607907
3D Structure	ModBase 3D Structure for P02452
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for COL1A1 elisa kit	Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. Antibody specific for COL1A1 has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any COL1A1 present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for COL1A1 is added to the wells. After washing, avidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of COL1A1 bound in the initial step. The color development is stopped and the intensity of the color is measured.
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	MBS703198 is a ready-to-use microwell, strip 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 MBS703198 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
NCBI Official Symbol	COL1A1
NCBI Official Synonym Symbols	OI4
UniProt Protein Name	Collagen alpha-1(I) chain
UniProt Synonym Protein Names	Alpha-1 type I collagen
Protein Family	Collagen
UniProt Gene Name	COL1A1
UniProt Entry Name	CO1A1_HUMAN
NCBI Protein Information	collagen alpha-1(I) chain; collagen alpha-1(I) chain; alpha-1 type I collagen; pro-alpha-1 collagen type 1; collagen alpha 1 chain type I; collagen alpha-1(I) chain preproprotein; collagen of skin, tendon and bone, alpha-1 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	**Function:** Type I collagen is a member of group I collagen (fibrillar forming collagen).
Research Articles on COL1A1	**1.** A2AR activation downstream signaling for Col1 and Col3 expression proceeds via two distinct pathways with varying sensitivity to cAMP activation.

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