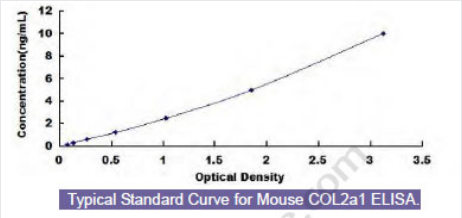
Collagentype II Alpha 1 (COL2a1) ELISA Kit for Mouse

PRODUCT OVERVIEW

Product Name	CollagenType II Alpha 1 (COL2a1), ELISA Kit
Full Product Name	Mouse CollagenType II Alpha 1 (COL2a1) ELISA Kit
Product Gene Name	COL2a1 elisa kit
Product Synonym Names	COL2-A1; COL2A1; SEDC; Chondrocalcin; Collagen Alpha-1(II)Chain; Primary Osteoarthritis,Spondyloepiphyseal Dysplasia,Congenital
Species Reactivity	Mouse
Assay Type	Quantitative Sandwich
Samples	Serum, plasma, tissue homogenates or other biological fluids
Detection Range	0.156-10ng/mL
Sensitivity	<0.055ng/mL.
Specificity	This assay has high sensitivity and excellent specificity for detection of COL2a1. No significant cross-reactivity or interference between COL2a1 and analogues was observed.
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level COL2a1 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 COL2a1 were tested 20 times on one plate, respectively. Intra-Assay: CV<10%
Molecular Weight	134,722 Da
3D Structure	ModBase 3D Structure for P28481
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for COL2a1 elisa kit	Intended Uses: The kit is a sandwich enzyme immunoassay for the in vitro quantitative measurement of COL2a1 in mouse serum, plasma, tissue homogenates or other biological fluids. Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to COL2a1. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to COL2a1. 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 COL2a1, 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 COL2a1 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of COL2a1 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 COL2a1 purchase	MBS457003 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the CollagenType II Alpha 1 (COL2a1) 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 COL2a1. The ELISA analytical biochemical technique of the MBS457003 kit is based on COL2a1 antibody-COL2a1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect COL2a1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, COL2a1. 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 COL2a1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL2a1. It may not necessarily be applicable to this product.

NCBI GI #	169658375
NCBI GeneID	12824
NCBI Accession #	NP_001106987.2
UniProt Primary Accession #	P28481
UniProt Secondary Accession #	Q61428; Q62031; Q62032; Q62033; Q641K3; Q6LDB1; Q6LDI8; Q6LDI9; Q80VY3; Q80X38; Q8CEF7
UniProt Related Accession #	P28481
GenBank Nucleotide #	NM_001113515.2
NCBI Official Full Name	collagen alpha-1(II) chain isoform 2
NCBI Official Synonym Full Names	collagen, type II, alpha 1
NCBI Official Symbol	Col2a1
NCBI Official Synonym Symbols	Dmm; Lpk; Col2; Del1; Col2a; Col2a-1; Rgsc856
UniProt Protein Name	Collagen alpha-1(II) chain
UniProt Synonym Protein Names	Alpha-1 type II collagen
UniProt Gene Name	Col2a1
NCBI Protein Information	collagen alpha-1(II) chain
NCBI Summary for COL2a1	This gene encodes the alpha-1 subunit of the fibril-forming type II collagen, the major component of cartilage and the vitreous humor of the eye. The encoded preproprotein forms homotrimeric, triple helical procollagen that undergoes proteolytic processing during fibirl formation. Mice harboring certain mutations in this gene exhibit severe chondrodysplasia characterized by short limbs and trunch, craniofacial deformities and cleft palate. A complete lack of the encoded protein in mice results in postnatal lethality. Alternative splicing results in multiple transcript variants encoding different isoforms that may undergo similar proteolytic processing. [provided by RefSeq, Dec 2015]
UniProt Comments for COL2a1	Type II collagen is specific for cartilaginous tissues. It is essential for the normal embryonic development of the skeleton, for linear growth and for the ability of cartilage to resist compressive forces.
Research Articles on COL2a1	**1.** These findings suggest a novel mechanism of action of SOX5/6; namely, the SOX9/5/6 combination enhances Col2a1 transcription through a novel enhancer in intron 6 together with the enhancer in intron 1.
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