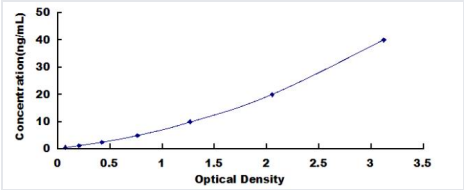
Collagen Type II Alpha 1 (COL2a1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Collagen Type II Alpha 1 (COL2a1), ELISA Kit
Full Product Name	Human Collagen Type 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	Human
Assay Type	Sandwich
Samples	Serum, Plasma or Other Biological Fluids.
Detection Range	0.625-40ng/mL
Sensitivity	0.227ng/mL
Preparation and Storage	For unopened kits: All the reagents should be kept at 4 degree C upon receipt. For opened kits: Once the kit is opened, the remaining reagents still need to be stored according to the above storage conditions. In addition, return the unused wells to the foil pouch containing the desiccant pack and reseal along entire edge of zip-seal.
Molecular Weight	29,781 Da
OMIM	108300
3D Structure	ModBase 3D Structure for P02458
RTU ELISA Kit's Advantage	The Ready-To-Use (RTU) Kits require fewer steps in setup and take less time to run. Detection Solutions are pre-diluted and total incubation time is shorter than many other ELISA Kits.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for COL2a1 elisa kit	Test Principle: 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	MBS458473 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Collagen Type 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 MBS458473 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 #	111118976
NCBI GeneID	1280
NCBI Accession #	NP_001835.3
UniProt Primary Accession #	P02458
UniProt Secondary Accession #	Q12985; Q14009; Q14044; Q14045; Q14046; Q14047; Q14056; Q14058; Q16672; Q1JQ82; A6NGA0
UniProt Related Accession #	P02458
GenBank Nucleotide #	NM_001844.4
NCBI Official Full Name	collagen alpha-1(II) chain isoform 1
NCBI Official Synonym Full Names	collagen type II alpha 1 chain
NCBI Official Symbol	COL2A1
NCBI Official Synonym Symbols	AOM; ANFH; SEDC; STL1; COL11A3
UniProt Protein Name	Collagen alpha-1(II) chain
UniProt Synonym Protein Names	Alpha-1 type II collagenCurated
UniProt Gene Name	COL2A1
NCBI Protein Information	collagen alpha-1(II) chain
NCBI Summary for COL2a1	This gene encodes the alpha-1 chain of type II collagen, a fibrillar collagen found in cartilage and the vitreous humor of the eye. Mutations in this gene are associated with achondrogenesis, chondrodysplasia, early onset familial osteoarthritis, SED congenita, Langer-Saldino achondrogenesis, Kniest dysplasia, Stickler syndrome type I, and spondyloepimetaphyseal dysplasia Strudwick type. In addition, defects in processing chondrocalcin, a calcium binding protein that is the C-propeptide of this collagen molecule, are also associated with chondrodysplasia. There are two transcripts identified for this gene. [provided by RefSeq, Jul 2008]
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.** A c.G1636A (p.G546S) mutation in the COL2A1 in 3 members of a family was associated with different metaphyseal changes. Findings revealed a different causative amino acid substitution (glycine to serine) associated with the "dappling" and "corner fracture" metaphyseal abnormalities and may provide a useful reference for evaluating the phenotypic spectrum and variability of type II collagenopathies.
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