Collagen Type V (COL5A2) Protein

PRODUCT OVERVIEW

Product Name	Collagen Type V (COL5A2), Protein
Full Product Name	Collagen Type V, Human
Product Gene Name	COL5A2 protein
Host	Placental villi
Form/Format	Supplied as a liquid in 500mM acetic acid.
Purity/Purification	Purified Controlled and limited pepsin digestion, followed by selective salt precipitation. > 90% as judged by SDS-PAGE analysis.
Preparation and Storage	The collagen may be transferred into physiological buffers by dialysis at 2-8 degree C. Purified collagen may be stored at 2-8 degree C for several months without appreciable loss of activity. For long-term storage, the purified collagen may be aliquoted and stored at -20 degree C. Avoid repeated freezing and thawing.
Molecular Weight	144,910 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (189896641..190044668, complement). Location: 2q14-q32
OMIM	120190
3D Structure	ModBase 3D Structure for P05997
Product Categories/Family for COL5A2 protein	Molecular Biology; MB-Collagen
Application Notes for COL5A2 protein	Type V collagen standard, , Antigen for antibody production, , Coating material for cell culture studies, , Formation of collagen gels
Related Product Information for COL5A2 protein	MBS635257 is a protein targeting COL5A2. Also known as Collagen Type V, Human. Host: Placental villi.
Other Notes	Small volumes of COL5A2 protein 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COL5A2. It may not necessarily be applicable to this product.

NCBI GI #	179698
NCBI GeneID	1290
NCBI Accession #	AAA51859.1
UniProt Primary Accession #	P05997
UniProt Secondary Accession #	P78440; Q13908; Q53WR4; Q59GR4; Q6LDJ5; Q7KZ55; Q86XF6; Q96QB0; Q96QB3
UniProt Related Accession #	P05997
NCBI Official Full Name	collagen type V alpha-2, partial
NCBI Official Synonym Full Names	collagen, type V, alpha 2
NCBI Official Symbol	COL5A2

UniProt Protein Name	Collagen alpha-2(V) chain
Protein Family	Collagen
UniProt Gene Name	COL5A2
UniProt Entry Name	CO5A2_HUMAN
NCBI Protein Information	collagen alpha-2(V) chain; collagen alpha-2(V) chain; AB collagen; type V preprocollagen alpha 2 chain; collagen, fetal membrane, A polypeptide
NCBI Summary for COL5A2	This gene encodes an alpha chain for one of the low abundance fibrillar collagens. Fibrillar collagen molecules are trimers that can be composed of one or more types of alpha chains. Type V collagen is found in tissues containing type I collagen and appears to regulate the assembly of heterotypic fibers composed of both type I and type V collagen. This gene product is closely related to type XI collagen and it is possible that the collagen chains of types V and XI constitute a single collagen type with tissue-specific chain combinations. Mutations in this gene are associated with Ehlers-Danlos syndrome, types I and II. [provided by RefSeq, Jul 2008]
UniProt Comments for COL5A2	COL5A2: Type V collagen is a member of group I collagen (fibrillar forming collagen). It is a minor connective tissue component of nearly ubiquitous distribution. Type V collagen binds to DNA, heparan sulfate, thrombospondin, heparin, and insulin. Type V collagen is a key determinant in the assembly of tissue- specific matrices. Defects in COL5A2 are a cause of Ehlers-Danlos syndrome type 1 (EDS1); also known as Ehlers-Danlos syndrome gravis or severe classic type Ehlers-Danlos syndrome. EDS is a connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. EDS1 is the severe form of classic Ehlers-Danlos syndrome. Defects in COL5A2 are a cause of Ehlers-Danlos syndrome type 2 (EDS2); also known as Ehlers-Danlos syndrome mitis or mild classic type Ehlers Danlos syndrome. Belongs to the fibrillar collagen family. Protein type: Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 2q14-q32 Cellular Component: extracellular matrix; collagen type V; endoplasmic reticulum lumen; extracellular region Molecular Function: extracellular matrix structural constituent; metal ion binding; SMAD binding Biological Process: skin development; extracellular matrix disassembly; collagen catabolic process; axon guidance; ossification; extracellular matrix organization and biogenesis; collagen fibril organization; skeletal development; eye morphogenesis Disease: Ehlers-danlos Syndrome, Type I
Research Articles on COL5A2	**1.** study shows that over 90% of patients, which strictly satisfy all major Villefranche criteria for classic Ehlers-Danlos Syndrome (EDS)harbor a type V collagen defect which indicates that this is the major--if not only--cause of classic EDS
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