

Active Recombinant Human collagen type I alpha 1 chain Protein, His tagged

Cat. No. COL1A1-114H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human collagen type I alpha 1 chain Protein (Gln23-Lys277 + Gly1094-Leu1464) with an N-terminal 6-His tag was expressed in Chinese Hamster Ovary cell line.
Species	Human
Source	CHO
ProteinLength	23-277 aa and 1094-1464 aa
Description	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.
Tag	N-6×His

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Bio-activity	Measured by the cleavage of its C-terminal propeptide by Recombinant Human BMP-1/PCP. > 50 % of full-length Pro-Collagen I alpha 1 is cleaved by Recombinant Human BMP-1/PCP, as measured under the described conditions.
Molecular Mass	65 kDa (full-length), 40 kDa, 28 kDa
N-terminal Sequence Analysis	His & Asp1219
Endotoxin	< 1.0 EU/μg of the protein by the LAL method.
Purity	> 80%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -70 centigrade as supplied. 3 months, -70 centigrade under sterile conditions after opening.
Storage Buffer	Supplied as a 0.2 μm filtered solution in Tris and NaCl.
Shipping	The product is shipped with dry ice or equivalent.
References	1. Canty, E.G. et al. (2005) J. Cell Sci. 118:1341. 2. Han, S. et al. (2008) J. Mol. Biol. 383:122.

GENE INFORMATION

Gene Name	COL1A1 collagen type I alpha 1 chain [Homo sapiens (human)]
Official Symbol	COL1A1

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Synonyms	COL1A1; collagen type I alpha 1 chain; OI1; OI2; OI3; OI4; EDSC; CAFYD; EDSARTH1; collagen alpha-1(I) chain; alpha-1 type I collagen; alpha1(I) procollagen; collagen alpha 1 chain type I; collagen alpha-1(I) chain preproprotein; collagen of skin, tendon and bone, alpha-1 chain; collagen, type I, alpha 1; pro-alpha-1 collagen type 1; type I proalpha 1; type I procollagen alpha 1 chain
Gene ID	1277
mRNA Refseq	NM_000088
Protein Refseq	NP_000079
MIM	120150
UniProt ID	P02452