

Product datasheet for **SC305574**

Collagen II (COL2A1) (NM_033150) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Collagen II (COL2A1) (NM_033150) Human Untagged Clone
Tag:	Tag Free
Symbol:	COL2A1
Synonyms:	ANFH; AOM; COL11A3; SEDC; STL1
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	>NCBI ORF sequence for NM_033150, the custom clone sequence may differ by one or more nucleotides

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ATGATTCCGCTCGGGGCTCCCCAGACGCTGGTGTGCTGACGCTGCTCGTCGCCGCTGTC
CTTCGGTGTGAGGGCCAGGATGTCCGGCAACCAGGACCAAGGGACAGAAAGGAGAACCT
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GCTGGTGAACGAGGCGAGCAGGGTGTCTCTGGGCCATCTGGGTTCCAGGGACTTCTGGC
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 ATCGAGTACCGGTACAGAAAGACCTCACGCCTCCCATATTGACATTGACCCATGGAC
 ATAGGAGGGCCCGAGCAGGAATTCGGTGTGGACATAGGGCCGGTCTGCTTCTGTAA

Restriction Sites:

Please inquire

ACCN:

NM_033150

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_033150.1](#), [NP_149162.1](#)

RefSeq Size: 4853 bp

RefSeq ORF: 4257 bp

Locus ID: 1280

UniProt ID: [P02458](#)

Cytogenetics: 12q13.11

Protein Pathways: ECM-receptor interaction, Focal adhesion

Gene Summary:

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]

Transcript Variant: This variant (2) lacks an alternate in-frame exon in the 5' coding region, compared to variant 1, resulting in a shorter protein. The resulting protein (isoform 2) lacks the von Willebrand factor type C (VWC) domain, compared to isoform 1.