

Product datasheet for **RC218041**

Collagen II (COL2A1) (NM_001844) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Collagen II (COL2A1) (NM_001844) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Collagen II
Synonyms:	ANFH; AOM; COL11A3; SEDC; STL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC218041 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGATTCGCTCGGGGCTCCCCAGTCGCTGGTGTCTGACGCTGCTCGTCGCCGCTGTCTTCGGTGTC
AGGGCCAGGATGTCCAGGAGGCTGGCAGCTGTGTGCAGGATGGGCAGAGGTATAATGATAAGGATGTGTG
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AGAGGTGCCCGTGGAGAGCCTGGTGGCGTTGGGCCCATCGGTCCCCCTGGAGAAAGAGGTGCTCCCGGAA
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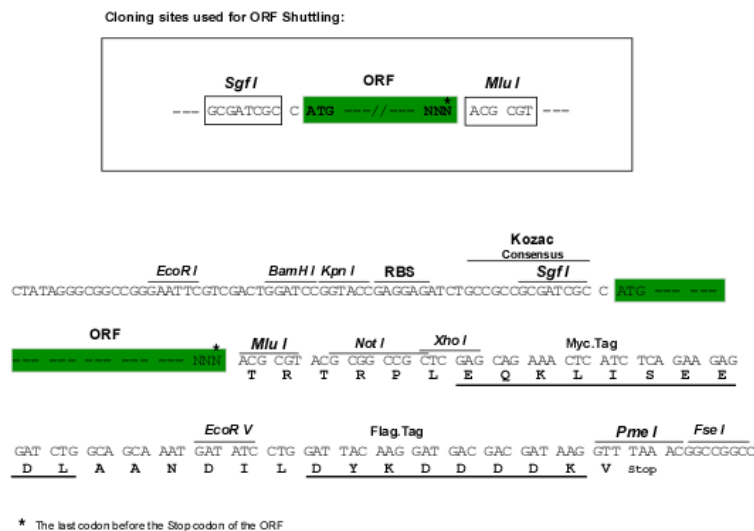
Protein Sequence: >RC218041 protein sequence
Red=Cloning site Green=Tags(s)

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DVKDCLSPEIPFGECCPICPTDLATASGQPGPKGQKGEPIKDIVGPKGPPGPQPAGEQGPGRDRGDK
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PPGPAGAPGPQGFQGNPGEPEPVSQPMGPRGPPGPPGKPGDDGEAGKPGKAGERGPPGPQGARGFPGT
PGLPGVKGHRGYPGLDGAKEAGAPGVKGESGSPGENSGPMGPRGLPGERGRTPAGAAGARGNDGQP
GPAGPPGPVGPAGGPGFPGAPGAKGEAGPTGARGPEGAQGPGEPTGSPGPAGASGNPGTDGIPGAKG
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VPKKNWSSKSKEKKHIWFGETINGGFHF SYGDDNLAPNTANVQMTFLRL STEGSQNITYHCKNSIAYL
DEAAGNLKALLIQGSNDVEIRAEGNSRFTYTALKDGCTKHTGKWKTVIEYRSQKTSRLPIIDIAPMDI
GGPEQEFQVDIGPVCFL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001844

ORF Size: 4461 bp

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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001844.3](#), [NP_001835.2](#)

RefSeq Size: 5087 bp

RefSeq ORF: 4464 bp

Locus ID: 1280

UniProt ID: [P02458](#)

Cytogenetics: 12q13.11

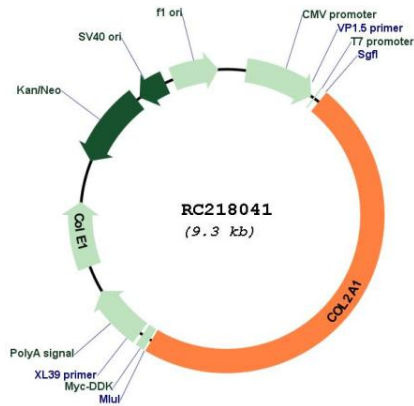
Protein Pathways: ECM-receptor interaction, Focal adhesion

MW: 141.8 kDa

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]

Product images:



Circular map for RC218041