

Product datasheet for **RC238697**

Collagen IV (COL4A1) (NM_001303110) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Collagen IV (COL4A1) (NM_001303110) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Collagen IV
Synonyms:	BSVD; BSVD1; COL4A1s; PADMAL; RATOR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC238697 representing NM_001303110.
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCACGATCGCC
ATGGGGCCCCGGCTCAGCGTCTGGCTGCTGCTGCTGCCCGCCCTTCTGCTCCACGAGGAGCACAGC
CGGGCCGCTGCGAAGGGTGGCTGTGCTGGCTCTGGCTGTGGCAAATGTGACTGCCATGGAGTGAAGGGA
CAAAGGGTGAAAGAGGCCTCCCGGGTTACAAGGTGTCATTGGGTTTCCCTGGAATGCAAGGACCTGAG
GGGCCACAGGGACCACCAGGACAAAAGGGTGACTGGAGAACCAGGACTACCTGGAACAAAAGGGACA
AGAGGACCTCCGGGAGCATCTGGCTACCCTGGAACCCAGGACTTCCCGAATTCCTGGCCAAGACGGC
CCGCCAGGCCCCAGGTATTCCAGGATGCAATGGCACAAAGGGGAGAGAGGGCCGCTCGGGCCTCCT
GGCTTGCTGGTTTCGCTGGAATCCCGGACCACCAGGCTTACCAGGGATGAAGGGTGTCCAGGTGAG
ATACTTGGCCATGTGCCGGGATGCTGTTGAAAGGTGAAAGAGGATTTCCCGAATCCAGGACTCCA
GGCCACCAGGACTGCCAGGGCTTCAAGGTCCTGTTGGGCTCCAGGATTTACCGGACCACCAGGTCCC
CCAGGCCCTCCCGCCCTCCAGGTGAAAAGGGACAAATGGGCTTAAAGTTTCAAGGACAAAAGGTGAC
AAGGGTGACCAAGGGGTCAAGTGGCCTCCAGGAGTACCAGGACAAGCTCAAGTTCAAGAAAAAGGAGAC
TTCCGCCACCAAGGGAGAAAAGGGCCAAAAGGTGAACCTGGATTTCAAGGGATGCCAGGGGTCCGAGAG
AAAGGTGAACCCGAAAACCAGGACCCAGAGGCAAACCCGAAAAGATGGTGACAAAGGGGAAAAGGG
AGTCCCGGTTTTCTGGTGAACCCGGTACCCAGGACTCATAGGCCGCCAGGGCCCGAGGGAGAAAAG
GGTGAAGCAGGTCTCTGGCCACCTGGAATTGTTATAGGCACAGGACCTTTGGGAGAAAAGGAGAG
AGGGGCTACCTGGAACCTCCGGGCCAAGAGGAGAGCCAGGCCAAAAGGTTTCCAGGACTACCAGGC
CAACCCGACCTCCAGGCCTCCCTGTACCTGGCAGGCTGGTGGCCCTGGCTTCCCTGGTGAAGAGGA
GAAAAGGTGACCGAGGATTTCTGGTACATCTCTGCCAGGACCAAGTGAAGAGATGGGCTCCCGGT
CCTCCTGGTTCCCTGGGCCCTCCGGCAGCCTGGCTACACAAATGGAATTGTGGAATGTAGCCCGGA
CCTCCAGGTGACCAGGTCTCCTGGAATTCAGGGCAGCCAGGATTTATAGGCAAAATGGAGAGAAA
GGTCAAAAAGGAGAGAGTTGCCTCATCTGTGATATAGACGGATATCGGGGCCCTCCCGGCCACAGGGA
CCCCGGGAGAAATAGGTTTCCAGGGCAGCCAGGGGCCAAGGGCAGCAGAGGTTTGCCTGGCAGAGAT
GGTGTGACAGGAGTGCCATTGCTTTTTCAAATCCATAAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Protein Sequence:

>Peptide sequence encoded by RC238697
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MGPRLSVWLLLLPAALLLHEEHSRAAKGGCAGSGCKDCHGVKQKGERGLPGLQGVIGFPGMQGPE
GPQGGPPQKGDTEPGLPGTKGTRGPPGASGYPGNPGLPGIPGQDGGPPPGIPGCNGTKGERGPLGPP
GLPGFAGNPGGPGLPGMKGDPGEILGHVPGMLLKGERGFPGIPGTPGPPGLPGLQGPVGGPFTGPPGP
PGPPGPPGKQMGLSFQGPKGDKGDQVSGPPGVPQAQVQEKGDFATKGEKQKGEPPGPGVGE
KGEPGKPGPRGKPGDKGDKGKSPGFPGEPPGYPGLIGRQGPQGEKGEAGPPGPPGIVIGTGPLGEKGE
RGYPGTPGPRGEPGPKGFPLPGQPGLPVPQAGAPGFPGERGEKGRGFPPTSLPGPSGRDGLPG
PPGSPGPPGQPGYTNIVECQPGPPGDQGGPPGIPGQPGFIDGEKQKGESCLICDIDYRPPGPPGQ
PPGEIGFPGQPGAKGDRGLPGRDGVAGVPLLFQIHK
TRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001303110

ORF Size: 1557 bp

OTI Disclaimer: 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.

RefSeq: [NM_001303110.2](#)

RefSeq Size: 2601 bp

RefSeq ORF: 1560 bp

Locus ID: 1282

UniProt ID: [P02462](#)

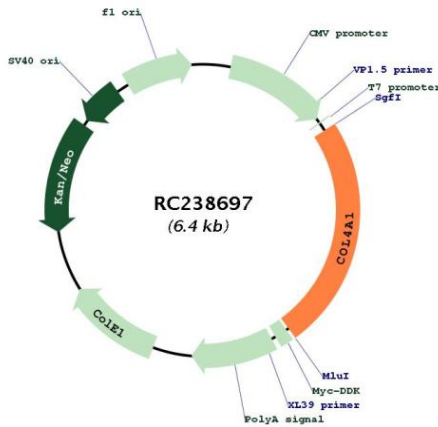
Cytogenetics: 13q34

Protein Pathways: ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer

MW: 50.2 kDa

Gene Summary: This gene encodes a type IV collagen alpha protein. Type IV collagen proteins are integral components of basement membranes. This gene shares a bidirectional promoter with a paralogous gene on the opposite strand. The protein consists of an amino-terminal 7S domain, a triple-helix forming collagenous domain, and a carboxy-terminal non-collagenous domain. It functions as part of a heterotrimer and interacts with other extracellular matrix components such as perlecan, proteoglycans, and laminins. In addition, proteolytic cleavage of the non-collagenous carboxy-terminal domain results in a biologically active fragment known as arresten, which has anti-angiogenic and tumor suppressor properties. Mutations in this gene cause porencephaly, cerebrovascular disease, and renal and muscular defects. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2014]

Product images:



Circular map for RC238697