

## Product datasheet for **RC211841**

### Collagen IV (COL4A4) (NM\_000092) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Collagen IV (COL4A4) (NM_000092) Human Tagged ORF Clone                     |
| Tag:                      | Myc-DDK   |
| Symbol:                   | Collagen IV   |
| Synonyms:                 | ATS2; BFH; CA44   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC211841 representing NM_000092<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGGTCTCTGCACATAGTACTAATGAGGTGCTCCTTCAGATTGACCAAGTCCTTGCCACAGGTCCT  
GGTCACTTATACTCATTCTCTTTCTGTACAATATGTATATGGGAGTGGAAAGAAATACATTGGTCTTG  
TGGAGGAAGAGATTGCTCTGTTTCCACTGTGTTCTGAAAAGGGGTCTCGGGTCCACCAGGACCACCA  
GGGCCACAGGGTCCAATTGGACCCCTGGAGCCCAAGGACCCATTGGGCTTTCAGGAGAGAAAGGAATGA  
GAGGGGACCGCGCCCTCTGGAGCAGCAGGGGACAAAGGAGATAAGGGTCCAACCTGGTGTCTCTGGATT  
TCCAGGTTTAGATGGCATACCTGGGCACCCAGGGCCTCCTGGACCCAGAGGCAAACCTGGTATGAGTGGC  
ACAATGGCTCAAGAGGTGACCCAGGGTTTCCAGGAGGAAGAGGAGCTCTTGCCACAGGAGGCCCTAG  
GCCATCCTGGGAAAAGGGAGAAAAAGGAAATTCAGTGTTCATTTAGGTGCCGTTAAAGGTATTCAGGG  
AGACAGAGGGGACCCAGGACTGCCTGGCTTACCAGGATCTTGGGTGCAGGAGGACCGGCAGGTCCACAC  
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CCTGTTGGTAGAGCCACCTGACTTTTGTCTCTATAAAGGAGAAAAGGGTATAAAGGAATTCCTGGAATG  
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CACCCAGGACCACAGGTGTTTTGGTACTCCACCTCTTCCACTCAAAGGCCACCAGGGGACCCAGGGT  
TCCCTGGCCGCTATGGAGAAACAGGGATGTTGGACACCTGGTCCCCAGGTCTTGGGCAGACCAGG  
GGAAGCCTGTGCAGGCATGATAGGACCCCTGGGCCACAAGGATTTCTGGTCTTCTGGCTTCCAGGA  
GAAGCTGGTATTCTGGGAGACCTGATTCTGCTCCAGGAAAACCAGGGAAGCCAGGATCACCTGGCTTGC  
CTGGAGCACCAGGCTGCAGGGCCTCCAGGATCAAGTGTGATATACTGTAGTGTGGGAACCCCGGACC  
ACAAGGAATAAAGGCAAAGTTGGTCCCCAGGAGGAAGAGGCCAAAAGGAGAAAAAGGAATGAAGGA



CTCTGTGCCTGTGAGCCTGGACCCATGGGCCCCCTGGCCCTCCAGGACTTCTGGGAGGCAGGGGAGTA  
 AGGGAGACTTGGGGCTCCTGGCTGGCTTGAACAAAAGGTGACCCAGGACCTCCTGGTGTGAAGGACC  
 TCCAGGGCTACCAGGAAAGCATGGTGCCTCTGGACCACCTGGCAACAAAGGGGCGAAGGGTGACATGGTT  
 GTATCAAGAGTTAAAGGGCACAAAGGAGAAAGAGGTCTGATGGGCCCCAGGATTTCCAGGGCAGCCAG  
 GATCACATGGTCGGGATGGACATGCTGGAGAAAAGGGGATCCAGGACCTCCAGGGGATCATGAAGATGC  
 GACCCAGGTGGTAAAGGATTTCTGGACCTCTGGGCCCCAGGCAAGCAGGACCTGTGGGGCCCCCA  
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 GCCCTGATGGCTTGAAGGGTCAGAAAAGGTGACACAATTTCTTGCAACGTAACTACCTGGGAGGCATGG  
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 CTCCTGGGTATCCAGGTAGCCAGGTGCTCCAGGTGGGAAAGGACAGCCGGGAGATGTGGGGCCTCCCG  
 GGCCAGCTGGAATGAAAGGCCTCCCGGACTCCAGGACGGCCTGGGGCAGATGGTCCCCAGGCCCTCC  
 AGGAATCCAGGTCCCTTTGGAGATGATGGGCTACCTGGTCTCCAGGTCCAAAGGGACCCCGGGGGCTG  
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 AACCTGGAGAGAAGGGCATGTCTGGCCTTCTGGAGACCGGGGACTGAGAGGGGCCAAAGGAGCCATAGG  
 ACCTCCCGGAGATGAAGGAGAAATGGCTATCATTTCAAAAAGGGAACACCTGGGGAACCTGGACCTCCT  
 GGAGATGATGGATTCCCAGGAGAAAGAGGTGATAAAGGAACTCCCGGATGCAAGGGAGAGAGGAGAGC  
 CGGGAAGATACGGACACCTGGATTTACAGAGGGGAACCTGGTGAGAAAGGTGAGCCAGGACCTCCTGG  
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 GGTGAGCCAGGTTCTCCAGGTCCCCTGGATTTTCCAGGAATTGATGGAGCAAGAGGACCTAAAGGAAACA  
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 GGGCCACCTGGCTCCTCTGGACCACCAGGGTGGCCAGGTGATCACGGGATGCCTGGGCTGAGGGGACAGC  
 CAGGAGAAATGGGAGACCCTGGGCCAAGAGGCCTCCAGGGGGATCCAGGGATACCAGGTCTCCGGGAAT  
 AAAAGGTCCCTCCGGATCACCTGGCCTGAACGGCTTGCATGGATTGAAAGGTGAGAAAGGAACTAAAGT  
 GCTTCAGGTTTGCATGATGTGGGGCCACCTGGTCCAGTGGGAATACCTGGGCTAAAAGGGGAGAGAGGAG  
 ACCCTGGGAGCCAGGAATCTCTCTCCAGGTCTCGTGAAAGAAAGGTCCCCAGGACCCAGGGAG  
 TTCAGGACCACCTGGTCTGCAGGTGCCACAGGAAGAGCTCTAAGGACATTTCTGACCCGGGTCCACCT  
 GGAGATCAGGGACCTCCTGGTCTGATGGCCAAAGAGGAGCACCTGGGCCTCCAGGCCTCCTGGGAGTG  
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 CCCTCCAGGATACAAAGGCTTTCCAGGATGTGATGGAAAAGATGGCCAGAAAGGACCAGTGGGATTTCCCG  
 GGACCCGACGGGACCACATGGATTTCTGGGCCACCTGGAGAGAAGGGTTTACCTGGACCTCCAGGGAGAA  
 AAGGGCCACTGGTCTTCCGGTCCCAGAGGTGAACCGGGCCACCTGCAGATGTGGATGACTGTCCCCG  
 AATCCCAGGCCTTCTGGGGCCAGGCATGAGAGGACCAGAAGGAGCCATGGGGCTCCCTGGAATGAGA  
 GGCCCTCAGGACCAGGTGCAAAGGAGAGCCTGGGCTGGATGGCAGGAGGGGTGGATGGCGTCCCTG  
 GGTCTCTGGGCCTCCCGACGTAAAGGTGACACAGGAGAAGACGGCTACCCTGGAGGACCAGGGCTCC  
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 TACTGGCTGGCCAGCGCTGCGCCCTCCCATGATGCCACTCTCTGAAGAGGCGATCCGCCCTATGTCA  
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 ATGTCCGACAGACCTGGAGGAGCCTCTGGATCGGGTATTATTCTGATGCACACAGGAGCTGGGGACCAA  
 GGAGGAGGGCAGGCCCTATGTACCTGGCAGCTGCCTGGAAGATTTCCAGAGCAGCACCATTCTTGAAT  
 GCCAGGGCCGGCAGGGAACCTTGCCACTTTTTCGCAAATAAGTATAGCTTCTGGCTCACAACGGTGAAGC  
 AGACTTGACAGTTTTCTCTGCTCCAGCACCAGACACCTTAAAAGAAAGCCAGGCCAACGCCAGAAAATC  
 AGCCGGTGCCAGGTCTGCGTGAAGTATAGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC211841 representing NM\_000092

Red=Cloning site Green=Tags(s)

MWSLHIVLMRCSFRLTKSLATGPWSLILILFSVQYVYGSKKYIGPCGGRDCSVCHCVPEKGSRGPPGPP  
GPQGPIGPLGAPGPIGLSGEKGMGRDRGPPGAAGDKGDKGPTGVPGFPLDGIPIGHPGPPGPRGKPGMSG  
HNGSRGDPGPFGRGALPGGGLGHPGEKGEKGNVFIILGAVKGIQGDGRDPLGGLPGSWGAGGAPGT  
GYPGEPGLVGGPPGPRGLKGNPGVGVKQMGDPGEVQQGSPGPTLLVEPPDFCLYKGEKGIKIPGM  
VGLPGPPGRKGESGIGAKGEKIPGFPGRDPSYSGSPGFPLKGEGLVGDPLFGLIGPKGDPGNRG  
HPGPPGLVTPPLPLKPPGDPGFPGRYGETGDVGGPPGGLLRPGEACAGMIGPPGQGFPLPLPG  
EAGIPGRPDSAPGKPGKPGSPGLPGAPLQGLPGSSVIYCSVGNPGPQGIKGVGPPGGRGPKGEKNEG  
LCACEPGMGPPLPGRQGSKGLGLPGWLGTKGDPGPPGAEGPPLPGKHGASGPPGNKGAAGDMV  
YSRVKGHKGERGDPGPPGFPQPGSHGRDHAGEKGDGPPGDHEDATPGGKGFPLGPPKAGPVGPP  
GLGFPGPPGERGHPGVPHPGVRGPDGLKQKGDITISCNVTPGRHGGPFDGPPGKGFPGPQAPGLS  
GSDGHKRPPTGTAEIPGPPGFRGMDPGFGEKGSPPVGGPPGSPGVNQGKIPGDPAFHGLGPP  
GKRGLSGVPGIKGPRGDPGCPGAEGPAGIPGFLGLKGPREGHAGFPVGGPPGHCERAGPIGQPG  
LPGYPSGAPAGGKQPGDVGGPPAGMKGLPGLPGRPGAHPGGLPGIPGPFDDGLGPPGPKGPRGL  
PGFPGFGERGKPGAEGCPGAKGEPGEKMSGLPGDRGLRGAKGAIKPPGDEGEMAIISQKGTGEPGPP  
GDDGFPGERGDKTPGMQRRGEPGRYPPGFHRGEPGEKQPPGPPGPPGSTGLRFGIFGPPGLPGDQ  
GEPGSPGPPGFSIDGARGPKGNKGDPAHFPPGPKGEPGSPGCPGHFGASGEQGLPGIQGPRGSPGRP  
GPPGSSGPPGCPGDHMPGLRGQPGEMDPPGPRGLQGDPIGPPGIKGPSGSPGLNGLHGLKQKGTGK  
ASGLHDVPPGPPVGIPLKGERGDPGSPGISPPGPRGKGGPPGPPGSSGPPGAGATGRAPKDIIDP  
GDQGGPPGDPGPRGAPGPPGLPGSDLLRGEPEGDCGLPGPPGPPGPPGPPGKGFPGCDGKDGKGPVGF  
GPQGGHGFPPGGEKGLGPPGRKGTGLPGRGEPGPPADVDDCPRIPLPGAPGMRGPEGAMGLP  
GMRGSPGCKGEPGLDGRRGVDGVPSPGPPGRKGDTEGEGYGGPPGPPGIPGDPGPKGFGPGLGGFL  
HSQTDQEPCTPLGMPRLWTGYSLLYLEGQEKAHNQDLGLAGSCLPVFSTLFPAYCNIHQVCHYAQRNDRS  
YWLASAAPLPMPLSEEAIRPYVSRCAVCEAPAQAVAVHSQDQSIPPCPQWRSWIGYSFLMHTGAGDQ  
GGGQALMSPGSLEDFAAPFLECGRQGTCHFFANKYSFWLTTVKADLQFSSAPADTLKESQAQRQKI  
SRCQVCVKYS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8025\\_b12.zip](https://cdn.origene.com/chromatograms/mk8025_b12.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



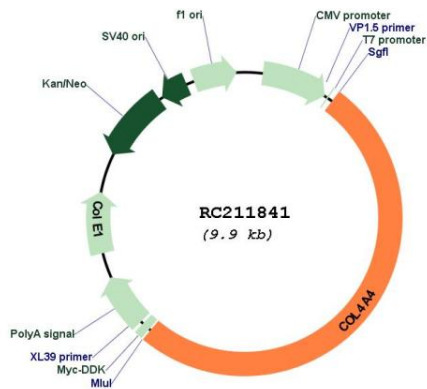
\* The last codon before the Stop codon of the ORF

ACCN: NM\_000092  
 ORF Size: 5070 bp

|                               |  |
|-------------------------------|--|
| <b>OTI Disclaimer:</b>        | <p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p> |
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.   |
| <b>Components:</b>            | 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).   |
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>  |
| <b>RefSeq:</b>                | <a href="#">NM_000092.5</a>  |
| <b>RefSeq Size:</b>           | 7843 bp  |
| <b>RefSeq ORF:</b>            | 5073 bp  |
| <b>Locus ID:</b>              | 1286   |
| <b>UniProt ID:</b>            | <a href="#">P53420</a>   |
| <b>Cytogenetics:</b>          | 2q36.3   |
| <b>Protein Families:</b>      | Druggable Genome   |
| <b>Protein Pathways:</b>      | ECM-receptor interaction, Focal adhesion, Pathways in cancer, Small cell lung cancer   |
| <b>MW:</b>                    | 164.04 kDa   |

**Gene Summary:**

This gene encodes one of the six subunits of type IV collagen, the major structural component of basement membranes. This particular collagen IV subunit, however, is only found in a subset of basement membranes. Like the other members of the type IV collagen gene family, this gene is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. Mutations in this gene are associated with type II autosomal recessive Alport syndrome (hereditary glomerulonephropathy) and with familial benign hematuria (thin basement membrane disease). Two transcripts, differing only in their transcription start sites, have been identified for this gene and, as is common for collagen genes, multiple polyadenylation sites are found in the 3' UTR. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for RC211841