

## Product datasheet for **RG201974**

### Carbonic Anhydrase II (CA2) (NM\_000067) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Carbonic Anhydrase II (CA2) (NM_000067) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Carbonic Anhydrase II
Synonyms:	CA-II; CAC; CAII; Car2; HEL-76; HEL-S-282
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201974 representing NM_000067 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCCCATCACTGGGGTACGGCAAACACAACGGACCTGAGCACTGGCATAAGGACTTCCCATTGCCA  
AGGGAGAGCGCCAGTCCCCTGTTGACATCGACTCATAAGCAAGTATGACCCCTCCCTGAAGCCCT  
GTCTGTTTCTATGATCAAGCAACTTCCCTGAGGATCCTCAACAATGGTCATGCTTCAACGTGGAGTTT  
GATGACTCTCAGGACAAAGCAGTGCTCAAGGGAGGACCCCTGGATGGCACTTACAGATTGATTCACTTTC  
ACTTTCCTGAGGTTCACTTGTGGACAAGTTTCAGAGCATACTGTGGATAAAAAGAAATATGCTGCAGA  
ACTTCACTTGGTTCACTGGAACACCAAATATGGGGATTTTGGGAAAGCTGTGCAGCAACCTGATGGACTG  
GCCGTTCTAGGTATTTTTTGAAGTTGGCAGCGCTAAACCGGGCCTTACGAAAGTTGTTGATGTGCTGG  
ATTCCATTAACAAAGGGCAAGAGTGCTGACTTCACTAACTTCGATCCTCGTGGCCTCCTTCTGAATC  
CCTGGATTACTGGACCTACCCAGGCTCACTGACCACCCCTCCTCTTCTGGAATGTGTGACCTGGATTGTG  
CTCAAGGAACCCATCAGCGTCAGCAGCGAGCAGGTGTTGAAATCCGTAACCTTAACTTCAATGGGGAGG  
GTGAACCCGAAGAACTGATGGTGGACAACCTGGCGCCAGCTCAGCCACTGAAGAACAGGCAAATCAAAGC  
TTCTTCAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG201974 representing NM\_000067  
 Red=Cloning site Green=Tags(s)

MSHHWGYGKHNGPEHWHKDFPIAKGERQSPVDIDTHTAKYDPSLKPLSVSYDQATSLRILNNGHAFNVEF  
 DDSQDKAVLKGGPLDGTYRLIQFHFHWGSLDGQSEHTVDKKKYAAELHLVHWNTKYGDFGKAVQQPDGL  
 AVLGI FLKVGSAKPLQKVVDVLD SIKTKGKSADF TNFDPRGLLPESLDYWTYPGSL TTPPLLEC VTWIV  
 LKEPISVSSEQVLKFRKLNFNNGEPEELMVDNWRPAQPLKNRQIKASFK

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000067

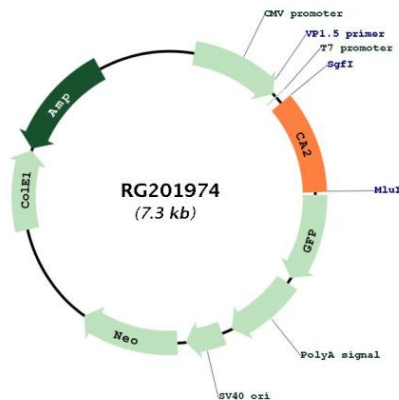
**ORF Size:** 780 bp

**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](mailto: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.

<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_000067.1</a> , <a href="#">NP_000058.1</a>
<b>RefSeq Size:</b>	1551 bp
<b>RefSeq ORF:</b>	783 bp
<b>Locus ID:</b>	760
<b>UniProt ID:</b>	<a href="#">P00918</a>
<b>Cytogenetics:</b>	8q21.2
<b>Domains:</b>	carb_anhydrase
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Nitrogen metabolism
<b>Gene Summary:</b>	The protein encoded by this gene is one of several isozymes of carbonic anhydrase, which catalyzes reversible hydration of carbon dioxide. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2014]

**Product images:**


Circular map for RG201974