

## Product datasheet for RC236162

### Carbonic Anhydrase II (CA2) (NM\_001293675) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Carbonic Anhydrase II (CA2) (NM\_001293675) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CA2  
**Synonyms:** CA-II; CAC; CAII; Car2; HEL-76; HEL-S-282  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RC236162 representing NM\_001293675  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGTCATGCTTCAACGTGGAGTTTGATGACTCTCAGGACAAAGCAGCTTCACTTGGTTCCTGGAACA  
 CCAAATATGGGGATTTGGGAAAGCTGTGCAGCAACCTGATGGACTGGCCGTTCTAGGTATTTTTTGA  
 GGTTGGCAGCGCTAAACCGGCCCTCAGAAAGTTGTTGATGTGCTGGATTCCATTAACAAAGGGCAAG  
 AGTGCTGACTTCACTAATTGATCCTCGTGGCCTCCTTCTGAATCCTTGGATTACTGGACCTACCCAG  
 GCTCACTGACCACCCCTCCTTCTGGAATGTGTGACCTGGATTGTGCTCAAGGAACCCATCAGCGTCAG  
 CAGCGAGCAGGTGTTGAAATTCGTAAACTTAACTTCAATGGGGAGGGTGAACCCGAAGAAGTATGGTG  
 GACAACTGGCGCCAGCTCAGCCACTGAAGAACAGGCAAATCAAAGCTTCCTTCAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC236162 representing NM\_001293675  
 Red=Cloning site Green=Tags(s)

MVMLSTWSLMLRTKQLHLVHWNTKYGDFGKAVQQPDGLAVLGIFLKVGSAPGLQKVVVDVLDISKTKGK  
 SADFTNFDPRGLLPESLDYWTYPGSLTTPPLLECVTWIVLKEPISVSSEQLKFRKLNFNNGEGEPEELMV  
 DNWRPAQPLKNRQIKASFK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

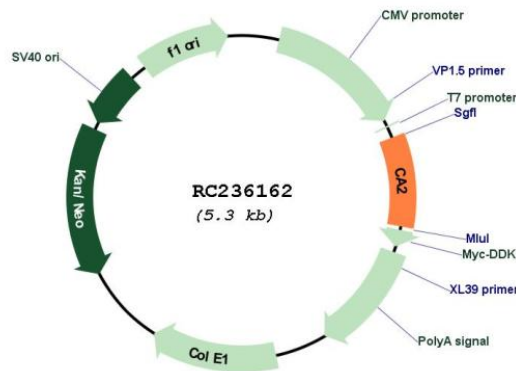


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## Cloning Scheme:



## Plasmid Map:



ACCN: NM\_001293675

ORF Size: 477 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.

<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>	<u>NM_001293675.1, NP_001280604.1</u>
<b>RefSeq Size:</b>	1547 bp
<b>RefSeq ORF:</b>	480 bp
<b>Locus ID:</b>	760
<b>Cytogenetics:</b>	8q21.2
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Nitrogen metabolism
<b>MW:</b>	18.4 kDa
<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]