

Product datasheet for **RC228786**

Carbonic Anhydrase I (CA1) (NM_001164830) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Carbonic Anhydrase I (CA1) (NM_001164830) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Carbonic Anhydrase I |
| Synonyms: | CA-I; CAB; Car1; HEL-S-11 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC228786 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCAAGTCCAGACTGGGGATATGATGACAAAAATGGTCCTGAACAATGGAGCAAGCTGTATCCCATTG
CCAATGGAATAACCCAGTCCCCTGTTGATATTAACCAGTGAAACCAACATGACACCTCTCTGAAACC
TATTAGTGTCTCCTACAACCCAGCCACAGCCAAAGAAATTATCAATGTGGGGCATTCTTCCATGTAAT
TTTGAGGACAACGATAACCGATCAGTGTGAAAGGTGGTCTTTCTCTGACAGCTACAGGCTCTTTCAGT
TCCATTTTCACTGGGGCAGTACAAATGAGCATGGTTCAGAACATACAGTGGATGGAGTCAAATATTCTGC
CGAGCTTCACGTAGCTCACTGGAATTCTGCAAAGTACTCCAGCCTTGCTGAAGCTGCCTCAAAGGCTGAT
GGTTTGGCAGTTATTGGTGTGGTGAAGGTTGGTGAAGGCAACCCAAAGCTGCAGAAAGTACTTGATG
CCCTCAAACAATTAACCAAGGGCAAACGAGCCCCATTACAAATTTTGACCCCTCTACTCTCCTTCC
TTCATCCTGGATTTCTGGACCTACCCTGGCTCTCTGACTCATCCTCCTTTATGAGAGTGAACCTGG
ATCATCTGTAAGGAGAGCATCAGTGTGAGCTCAGAGCAGCTGGCACAATTCGCAGCCTTCTATCAAATG
TTGAAGGTGATAACGCTGTCCCATGCAGCACACAACCGCCCAACCAACCTCTGAAGGGCAGAACAGT
GAGAGCTTCATTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC228786 protein sequence
Red=Cloning site Green=Tags(s)

MASPDWGYDDKNGPEQWSKLYPIANGNNQSPVDIKTSETKHDTSLKPISVSYNPATAKEIINVGHFSFHVN
 FEDNDNRSVLKGGPFSDSYRLFQFHFWGSTNEHGSEHTVDGVKYSALHVAHWNSAKYSSLAEAASKAD
 GLAVIGVLMKVGEANPKLQKVLDALQAIKTKGRAPFTNFDPSTLLPSSLDFWTPGSLTHPPLYESVTW
 IICKESISVSSEQLAQRSLLSNVEGDNAVPMQHNNRPTQPLKGRTVRAS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8075_d02.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_001164830

ORF Size: 783 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_001164830.2](#)

RefSeq Size: 1211 bp

RefSeq ORF: 786 bp

Locus ID: 759

UniProt ID: [P00915](#)

Cytogenetics: 8q21.2

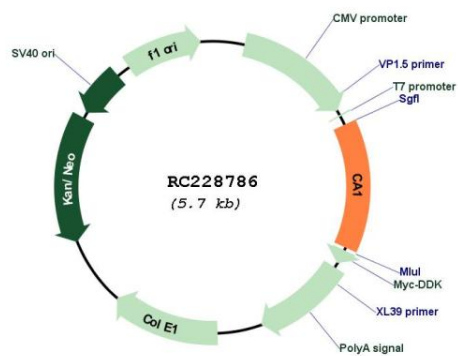
Protein Families: Druggable Genome

Protein Pathways: Nitrogen metabolism

MW: 28.9 kDa

Gene Summary: Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. This CA1 gene is closely linked to the CA2 and CA3 genes on chromosome 8. It encodes a cytosolic protein that is found at the highest level in erythrocytes. Allelic variants of this gene have been described in some populations. Alternative splicing and the use of alternative promoters results in multiple transcript variants. [provided by RefSeq, Nov 2016]

Product images:



Circular map for RC228786