

Product datasheet for **RG204839**

Carbonic Anhydrase IX (CA9) (NM_001216) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Carbonic Anhydrase IX (CA9) (NM_001216) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Carbonic Anhydrase IX
Synonyms:	CAIX; MN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204839 representing NM_001216
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGCTCCCTGTGCCCCAGCCCTGGCTCCCTCTGTTGATCCCGCCCCCTGCTCCAGGCCCTCACTGTGC
 AACTGCTGCTGCTACTGCTGCTTCTGATGCCTGTCCATCCCAGAGGTTGCCCGGATGCAGGAGGATTC
 CCCCTTGGGAGGAGGCTCTTCTGGGAAGATGACCCACTGGGCGAGGAGGATCTGCCAGTGAAGAGGAT
 TCACCCAGAGAGGAGGATCCACCCGGAGAGGAGGATCTACCTGGAGAGGAGGATCTACCTGGAGAGGAGG
 ATCTACCTGAAGTTAAGCCTAAATCAGAAGAAGAGGGCTCCCTGAAGTTAGAGGATCTACCTACTGTTGA
 GGCTCCTGGAGATCCTCAAGAACCCAGAATAATGCCACAGGGACAAAGAAGGGGATGACCAGAGTCAT
 TGGCGCTATGGAGGCGACCCGCCCTGGCCCCGGGTGTCCCAGCCTGCGCGGGCCGCTTCCAGTCCCCGG
 TGGATATCGCCCCAGCTCGCCGCTTCTGCCGGCCCTGCGCCCCCTGGAACCTCTGGGCTTCCAGCT
 CCCGCCGCTCCAGAACTGCGCCTGCGCAACAATGGCCACAGTGTGCAACTGACCCTGCCTCCTGGGCTA
 GAGATGGCTCTGGGTCCCGGGCGGGAGTACCGGCTCTGCAGCTGCATCTGCACTGGGGGCTGCAGGTC
 GTCGGGGCTCGGAGCACACTGTGGAAGGCCACCGTTTCCCTGCCGAGATCCACGTGGTTCACCTCAGCAC
 CGCCTTGGCCAGAGTTGACGAGGCCCTGGGGCGCCCGGAGGCCTGGCCGTGTTGGCCGCTTCTGGAG
 GAGGGCCCGAAGAAAACAGTGCCTATGAGCAGTTGCTGTCTCGCTTGAAGAAATCGCTGAGGAAGGCT
 CAGAGACTCAGTCCCAGGACTGGACATATCTGCACTCCTGCCCTCTGACTTCAGCCGCTACTTCCAATA
 TGAGGGTCTCTGACTACACCGCCCTGTGCCAGGGTGTATCTGGACTGTGTTTAAACAGACAGTGATG
 CTGAGTGCTAAGCAGCTCCACACCCTCTGACACCCTGTGGGACCTGGTGACTCTCGGCTACAGCTGA
 ACTTCCGAGCGACGACGCTTTGAATGGGCGAGTGATTGAGGCCCTCCTTCCCTGCTGGAGTGACAGCAG
 TCCTCGGGCTGCTGAGCCAGTCCAGCTGAATTCCTGCCTGGCTGCTGGTGACATCCTAGCCCTGGTTTTT
 GGCTCCTTTTTGCTGTACCAGCGTCGCGTTCCTTGTGCAGATGAGAAGGCAGCACAGAAGGGGAACCA
 AAGGGGTGTGAGCTACCGCCAGCAGAGGTAGCCGAGACTGGAGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

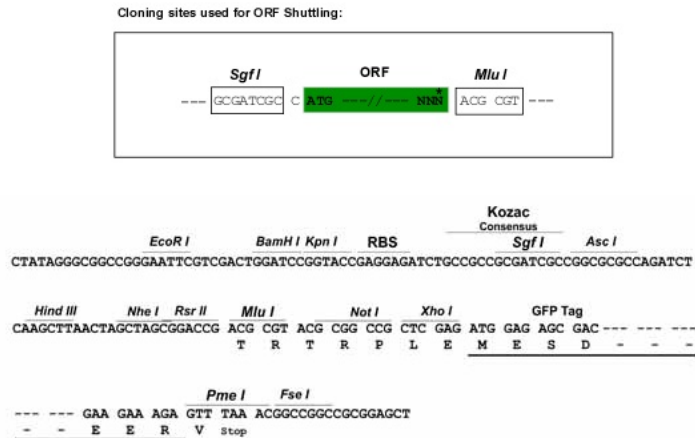
>RG204839 representing NM_001216
 Red=Cloning site Green=Tags(s)

MAPLCPSPWLPLLIPAPAPGLTVQLLL SLLLLMPVHPQRLPRMQEDSPLGGGSSGEDDPLGEEDLPSEED
 SPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDLPTVEAPGDPQEPQNNHRDKEGDDQSH
 WRYGGDPPWPRVSPACAGRFQSPVDIRPQLAAFCPALRPELELLGFQLPPLPELRLRNNHGSVQLTLPPGL
 EMALGPGREYRALQLHLHWGAAGRPGSEHTVEGHRFPAEIHVVHLSTAFARVDEALGRPGGLAVLAAFLE
 EGPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDFSRYFYEGSLTTPPCAQGVIVTFNQTVM
 LSAKQLHTLSDTLWGPGRSRLQLNFRATQPLNGRVIEASFPAGVDSPPRAAEPVQLNSCLAAGDILALVF
 GLLFAVTSVAFLVQMRRQHRRGTKGGVSYRPAEVAETGA

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001216

ORF Size: 1377 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_001216.1](#), [NP_001207.1](#)

RefSeq Size: 1552 bp

RefSeq ORF: 1380 bp

Locus ID: 768

UniProt ID: [Q16790](#)

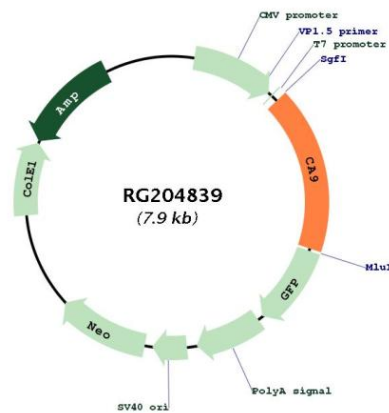
Cytogenetics: 9p13.3

Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Nitrogen metabolism

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. CA IX is a transmembrane protein and is one of only two tumor-associated carbonic anhydrase isoenzymes known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation. This gene was mapped to 17q21.2 by fluorescence in situ hybridization, however, radiation hybrid mapping localized it to 9p13-p12. [provided by RefSeq, Jun 2014]

Product images:



Circular map for RG204839