

## Product datasheet for **RG225351**

### Carbonic Anhydrase I (CA1) (NM\_001128831) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | Carbonic Anhydrase I (CA1) (NM_001128831) Human Tagged ORF Clone               |
| Tag:                      | TurboGFP   |
| Symbol:                   | CA1  |
| Synonyms:                 | CA-I; CAB; Car1; HEL-S-11  |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-AC-GFP (PS100010)  |
| E. coli Selection:        | Ampicillin (100 ug/mL)   |
| ORF Nucleotide Sequence:  | >RG225351 representing NM_001128831<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAAGTCCAGACTGGGGATATGATGACAAAAATGGTCCTGAACAATGGAGCAAGCTGTATCCCATTG  
CCAATGGAATAACCCAGTCCCCTGTTGATATTAACCAGTGAAACCAACATGACACCTCTCTGAAACC  
TATTAGTGTCTCCTACAACCCAGCCACAGCCAAAGAAATATCAATGTGGGGCATTCTTCCATGTAAT  
TTTGAGGACAACGATAACCGATCAGTGTGAAAGGTGGTCTTTCTCTGACAGCTACAGGCTCTTTCAGT  
TCCATTTTCACTGGGCGAGTACAATGAGCATGGTTCAGAACATACAGTGGATGGAGTCAAATATTCTGC  
CGAGCTTCACGTAGCTCACTGGAATTCTGCAAAGTACTCCAGCCTTGCTGAAGCTGCCTCAAAGGCTGAT  
GGTTTGGCAGTTATTGGTGTGGTGAAGGTTGGTGAAGGCAACCCAAAGCTGCAGAAAGTACTTGATG  
CCCTCCAAGCAATTAACCAAGGGCAAACGAGCCCCATTACAAATTTTGACCCCTCTACTCTCCTTCC  
TTCATCCCTGGATTTCTGGACCTACCCTGGCTCTCTGACTCATCCTCCTTTATGAGAGTGAACCTGG  
ATCATCTGTAAGGAGAGCATCAGTGTGAGCTCAGAGCAGCTGGCACAATCCGCAGCCTTCTATCAAATG  
TTGAAGGTGATAACGCTGTCCCATGCAGCACAACAACCGCCCAACCAACCTCTGAAGGGCAGAACAGT  
GAGAGCTTCATTT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG225351 representing NM\_001128831  
 Red=Cloning site Green=Tags(s)

MASPDWGYYDDKNGPEQWSKLYPIANGNNQSPVDIKTSETKHDTSLKPISVSYNPATAKEIINVGHSHFHVN  
 FEDNDNRSVLKGGPFSDSYRLFQFHFWGSTNEHGSEHTVDGVKYSaelHVAHWNSAKYSSLAEEASKAD  
 GLAVIGVLMKVGEANPKLQKVLDALQAIKTKGRAPFTNFDPSTLLPSSLDFWTYPGSLTHPPLYESVTW  
 IICKESISVSSEQLAQFRSLLSNVEGDNAVPMQHNNRPTQPLKGRTVRASf

TRTRPLE - GFP Tag - V

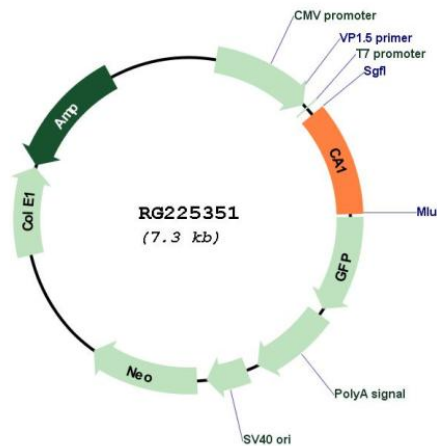
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**



**ACCN:** NM\_001128831

**ORF Size:** 783 bp

|                               |  |
|-------------------------------|--|
| <b>OTI Disclaimer:</b>        | 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>   |
| <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_001128831.4</a>   |
| <b>RefSeq Size:</b>           | 1156 bp  |
| <b>RefSeq ORF:</b>            | 786 bp   |
| <b>Locus ID:</b>              | 759  |
| <b>UniProt ID:</b>            | <a href="#">P00915</a>   |
| <b>Cytogenetics:</b>          | 8q21.2   |
| <b>Protein Families:</b>      | Druggable Genome   |
| <b>Protein Pathways:</b>      | Nitrogen metabolism  |
| <b>Gene Summary:</b>          | 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] |