

## Product datasheet for **SC334371**

### Carbonic Anhydrase I (CA1) (NM\_001291967) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Carbonic Anhydrase I (CA1) (NM_001291967) Human Untagged Clone
Tag:	Tag Free
Symbol:	CA1
Synonyms:	CA-I; CAB; Car1; HEL-S-11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001291967, the custom clone sequence may differ by one or more nucleotides

```
ATGGCAAGTCCAGACTGGGGATATGATGACAAAAATGTGCTGAAAGGTGGTCCTTTCTCTGACAGCTACA
GGCTCTTTTCAGTTCATTTTCACTGGGGCAGTACAAATGAGCATGGTTCAGAACATACAGTGGATGGAGT
CAAATATTCTGCCGAGCTTCACGTAGCTCACTGGAATTCTGCAAAGTACTCCAGCCTTGCTGAAGCTGCC
TCAAAGGCTGATGGTTTGGCAGTTATTGGTGTTTTGATGAAGGTTGGTGAGGCCAACCCAAAGCTGCAGA
AAGTACTTGATGCCCTCAAGCAATTAACCAAGGGCAAACGAGCCCCATTACAAATTTTGACCCCTC
TACTCTCCTTCTTCATCCCTGGATTTCTGGACCTACCCTGGCTCTCTGACTCATCCTCCTTTATGAG
AGTGTAACCTGGATCATCTGTAAGGAGAGCATCAGTGTCAGCTCAGAGCAGCTGGCACAATTCGCAGCC
TTCTATCAAATGTTGAAGGTGATAACGCTGTCCCATGCAGCACAAACCGCCCAACCCAACTCTGAA
GGGCAGAACAGTGAGAGCTTCATTTTGA
```

Restriction Sites:	Sgfl-MluI
ACCN:	NM_001291967
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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).



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**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\\_001291967.1](#), [NP\\_001278896.1](#)

**RefSeq Size:** 1067 bp

**RefSeq ORF:** 588 bp

**Locus ID:** 759

**Cytogenetics:** 8q21.2

**Protein Families:** Druggable Genome

**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. 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]

Transcript Variant: This variant (6) differs in the 5' UTR and lacks an alternate in-frame exon in the 5' coding region, compared to variant 3. The encoded isoform (b) is shorter than isoform a. This variant represents use of an upstream long terminal repeat (LTR) promoter and exon sequence, and results in erythroid expression. (PMID: 1908227).