

## Product datasheet for **SC117603**

### CA8 (NM\_004056) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CA8 (NM_004056) Human Untagged Clone
Tag:	Tag Free
Symbol:	CA8
Synonyms:	CA-RP; CA-VIII; CALS; CAMRQ3; CARP
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC117603 sequence for NM_004056 edited (data generated by NextGen Sequencing)

```
ATGGCGGACCTGAGCTTCATCGAAGATACCGTCGCCTTCCCCGAGAAGGAAGAGGATGAG
GAGGAAGAAGAGGAGGGTGTGGAGTGGGCTACGAGGAAGGTGTTGAGTGGGGTCTGGTG
TTTCCTGATGCTAATGGGAATACCAGTCTCCTATTAACCTAAACTCAAGAGAGGCTAGG
TATGACCCTCGCTGTTGGATGTCCGCCTCTCCCAAATTATGTGGTGTGCCGAGACTGT
GAAGTCACCAATGATGGACATACCATTAGGTTATCCTGAAGTCAAAATCAGTTCTTTTCG
GGAGGACCATTGCCTCAAGGGCATGAGTTTGAAGTGTACGAAGTGAAGTTTCACTGGGGA
AGAGAAAACCAGCGTGGTTCTGAGCACACGGTTAATTTCAAAGCTTTTCCCATGGAGCTC
CATCTGATCCACTGGAATCCACTCTGTTTGGCAGCATTGATGAGGCTGTGGGAAGCCG
CACGGAATCGCCATCATTGCTCTGTTTGTTCAGATAGGAAAGGAACATGTTGGCTTGAAG
GCTGTGACTGAAATCCTCCAAGATATTCAGTATAAGGGGAAGTCCAAAACAATACCTTGC
TTAATCCTAACACTTTATTACCAGACCCTCTGCTGCGGGATTACTGGGTGTATGAAGGC
TCTCTACCATCCCACCTTGCAAGTGAAGGTGTCACCTGGATATTATCCGATACCCTTTA
ACTATATCCCAGCTACAGATAGAAGAAATTTCAAGGCTGAGGACACATGTTAAGGGGGCA
GAACTTGTGGAAGGCTGTGATGGGATTTTGGGAGACAACCTTCGGCCACTCAGCCTCTT
AGTGACAGAGTCATTAGAGCTGCATTTTCAGTAG
```

Clone variation with respect to NM\_004056.4  
327 a=>g



[View online »](#)

<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_004056 unedited</p> <pre> ATTTGTAATACGAACTACTATAGGGCGGCCGGAATTCGCACGAGGTCGCTCTGCTGGG GCCTCCGGACGCGCTTCCCAGCGGGTCTCTGGAACACTCGGTCCGAACGCACGCCTGCTT GCACTCACAACGCGGTTACACCCCGCAGGCGCTCTCGACCCACACTGCCGCTCACGCGC GCTCACAACCCCCACGCGCGCTCCGCTCCGGCTCCAGCCCCGCCCCGCGAAGGCGCA GGCACTGCTGCCGAGAGCGCCGAGGGGCCCGCGGCCTTCCCATGGCGGACCTGAGCTTC ATCGAAGATACCGTCGCCTTCCCAGAGAAGGAAGAGGATGAGGAGGAAGAAGAGGAGGGT GTGGAGTGGGGCTACGAGGAAGGTGTTGAGTGGGGTCTGGTGTTCCTGATGCTAATGGG GAATACCACTCTCCTATTAACCTAAACTCAAGAGAGGCTAGGTATGACCCCTCGCTGTTG GATGTCCGCCTCTCCCAAATTATGTGGTGTGCCGAGACTGTGAAGTCACCAATGATGGA CATACCATTAGGTTATCCTGAAGTCAAAATCAGTTCTTTTCGGGAGGACCATTGCCTCAA GGGCATGAGTTTGAAGTACGAAGTGAAGTTTCACTGGGGAAGAGAAAACAGCGTGGT TCTGAGCACACGGTTAATTTCAAAGCTTTTCCCATGGAGCTCCATCTGATCCACTGGAAC TCCACTCTGTTTGGCAGCATTGATGAGGCTGTGGGGAAGCCGCACGGAATCGCCATCATT GCTCTGTTTGTTCAGATAGGAAAGAACATGTTNNGCTGAGGCTGTGACTGANATCCTCCA AGAATTCAGTATAAGGGGGAAGTCCAAACAATACCTTGCTTT </pre>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_004056 unedited</p> <pre> AGCTATGGACCCGCGCCGAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTCATT TCAGTCTTTTACTCAAAAAATATACAGTAAATAAATTCAAATTGCTTCAATATACAGACA TAAACACACATACACACACACCTGTGAAGGGTGAAGTCTGAACAACACTAGATGTTATCCTG AAAGTCATTTAATTACTATTTGTTATTGATTTTGTGTTTTTTTGTGATTTTCAGGGAAAGA TGAAAGAAGATTGCAAGAAGCATCAGAAGTCTAGTTCAAGAACAATCCCTGACTGTTTCAG CACCAACCCGGTCAGGAGTGGAAAGGCTGGTACCTGTGCAGTGTTCCTGTTCCAGGAATGC CATATGAATGGCCTCTCATTTATGGAAGGCTTCAAATCTAGTCTTTTGTGTTAATTACA AATAAGGCTGCACGTGTGCAGCCAATGTTTGGCATGTGAGTGGTAAACAGTGTAGATGTA AATATTTTTGTCACAGTTTTGTAACCATGCTTCACCATTTCTCATTGTTGGACTAGG AACTGTTATACATAAGGGGAAGTCCAGGACCTCTCTCCGCTTTCAGAGGCACTGCCTGGTG CTGACCCCATGTGATCCCAGGGCTACCCAACAGATCTCAACCCCTTAGCAAGCCTCAAC TTTTCCACACATTGCCATAACCCTAGTCCTTTCTCTTGCTGCCAAGAAACATGATGAAC TTTCTTTGCTTGAATTTAGGGATTTCTGGTGTGATTTTCATTTGNATTAAGGCTCCCCT TATTACCGCCTTTACTCAACAAATCTAANAACCTGCACATATACTTATTACACCTGTCT TCTATTTCTATGACTTAGATATCTTGCATCACAAAATCCCTCCAACCTGGGCACTATGTT TTTGAAGCCATTCATTTACAATCTTACATCCATTACCCTATTCTTATTGTGTGCTTTGA G </pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_004056
<b>Insert Size:</b>	2870 bp
<b>OTI Disclaimer:</b>	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).
<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).

**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\\_004056.4](#), [NP\\_004047.3](#)

**RefSeq Size:** 2278 bp

**RefSeq ORF:** 873 bp

**Locus ID:** 767

**UniProt ID:** [P35219](#)

**Cytogenetics:** 8q12.1

**Domains:** carb\_anhydrase

**Protein Families:** Druggable Genome

**Protein Pathways:** Nitrogen metabolism

**Gene Summary:** The protein encoded by this gene was initially named CA-related protein because of sequence similarity to other known carbonic anhydrase genes. However, the gene product lacks carbonic anhydrase activity (i.e., the reversible hydration of carbon dioxide). The gene product continues to carry a carbonic anhydrase designation based on clear sequence identity to other members of the carbonic anhydrase gene family. The absence of CA8 gene transcription in the cerebellum of the lurcher mutant in mice with a neurologic defect suggests an important role for this acatalytic form. Mutations in this gene are associated with cerebellar ataxia, mental retardation, and dysequilibrium syndrome 3 (CMARQ3). Polymorphisms in this gene are associated with osteoporosis, and overexpression of this gene in osteosarcoma cells suggests an oncogenic role. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]

Transcript Variant: This variant (1) encodes the longest isoform (a). Both variants 1 and 2 encode isoform a. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.