

## Product datasheet for **SC125991**

### Carbonic Anhydrase IV (CA4) (NM\_000717) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Carbonic Anhydrase IV (CA4) (NM_000717) Human Untagged Clone
Tag:	Tag Free
Symbol:	CA4
Synonyms:	CAIV; Car4; RP17
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000717 edited  
GGCTCCGCTATAAAACCCAGGCCGCGCAGGATCGCTGCACCCGCGCGGCCTCCTCGGTGC  
GCGACCCCGGCTCAGAGGACTCTTTGCTGTCCCGCAAGATGCGGATGCTGCTGGCGCTC  
CTGGCCCTCTCCGCGCGCGGCCATCGGCCAGTGCAAGTGCACACTGGTGTACGAGGTT  
CAAGCCGAGTCCCTCCAACCTACCCCTGCTTGGTGCCAGTCAAGTGGGGTGGAACTGCCAG  
AAGGACCGCCAGTCCCCATCAACATCGTCACCACCAAGGCAAAGGTGGACAAAAAACTG  
GGACGCTTCTTCTCTCTGGCTACGATAAGAAGCAAACGTGGACTGTCCAAAATAACGGG  
CACTCAGTGATGATGTTGCTGGAGAACAAGGCCAGCATTCTGGAGGAGGACTGCCTGCC  
CCATACCAGGCCAAACAGTTGCACCTGCACTGGTCCGACTTGCCATATAAGGGCTCGGAG  
CACAGCCTCGATGGGAGCACTTTGCCATGGAGATGCACATAGTACATGAGAAAGAGAAG  
GGGACATCGAGGAATGTGAAAGAGGCCAGGACCCTGAAGACGAAATTGCGGTGCTGGCC  
TTTCTGGTGGAGGCTGGAACCCAGGTGAACGAGGGCTTCCAGCCACTGGTGGAGGCACTG  
TCTAATATCCCCAAACCTGAGATGAGCACTACGATGGCAGAGAGCAGCCTGTTGGACCTG  
CTCCCCAAGGAGGAGAACTGAGGCACTACTTCCGCTACTGGGCTCACTCACCACACCG  
ACCTGCGATGAGAAGGTCGTCTGGACTGTGTTCCGGGAGCCATTGAGCTTACAGAGAA  
CAGATCCTGGCATTCTCTCAGAAGCTGTACTACGACAAGGAACAGACAGTGAAGATGAAG  
GACAATGTCAGGCCCTGCAGCAGCTGGGGCAGCGCACGGTGATAAAGTCCGGGGCCCCG  
GGTCGGCCGCTGCCCTGGGCCCTGCCTGCCCTGCTGGGCCCATGCTGGCCTGCCTGCTG  
GCCGGCTTCTGCGATGATGGCTCACTTCTGCACGCAGCCTCTCTGTTGCCTCAGCTCTC  
CAAGTTCCAGGCTTCCGGTCTTAGCCTTCCAGGTGGGACTTTAGGCATGATTAATAATA  
TGGACATATTTTTGAAAAAAAAAAAAAAAAA



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_000717 unedited NNGGGGTTCAAAATTGTATACGACTCATATAGGCGGCCGCATAACTTCGTATAGCATACA TTATACGAAGTTATGGATCAGGCCAAATCGGCCGAGCTCGAATTCGTTCGAGCTCTAGCGA GGTGACAGCGTAGAACAGGGCTCCGCTATAAAACCCAGGCCGGCAGGATCGCTGCACCC GCGGCGGCTCCTCGGTGCGCGACCCCGGCTCAGAGGACTCTTTGCTGTCCCGCAAGAT GCGGATGCTGCTGGCGCTCCTGGCCCTCTCCGCGGCGCGGCCATCGGCCAGTGCAGAGTC AACTGTGTGCTACGAGGTTCAAGCCGAGTCTCCAACCTACCCCTGCTTGGTGCCAGTCAA GTGGGGTGGAAACTGCCAGAAGGACCGCCAGTCCCCCATCAACATCGTCACCACCAAGGC AAAGGTGGACAAAAAAGTGGGACGCTTCTTCTTCTGCTACGATAAGAAGCAAACGTG GACTGTCCAAAATAACGGGCACTCAGTGATGATGTTGCTGGAGAACAAGGCCAGCATTTC TGGAGGAGGACTGCCTGCCCCATACCAGGCCAAACAGTTGCACCTGCACTGGTCCGACTT GCCATATAAGGGCTCGGAGCACAGCCTCGATGGGAGCACTTTGCCATGGAGATGCACAT AGTACATGAGAAAGAGAAGGGGACATCGAGGAATGTGAAAGAGGCCAGGACCCTGAAGA CGAAATTGCGGTGCTGGCCTTTCTGGTGGAGGCTGGAACCCAGGTGAACGAGGGCTTCCA GCCACTGGTGGAGCACTGTCTAATATCCCCAACCTGAGATGAGCACTACGATGGCAGA GAGCAGCCTGTTGGACCTGCTCCCAAGGAGGAGAAA
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_000717
<b>Insert Size:</b>	939 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).
<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_000717.2</a> , <a href="#">NP_000708.1</a>
<b>RefSeq Size:</b>	1104 bp
<b>RefSeq ORF:</b>	939 bp
<b>Locus ID:</b>	762
<b>UniProt ID:</b>	<a href="#">P22748</a>
<b>Cytogenetics:</b>	17q23.1
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	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 gene encodes a glycosylphosphatidyl-inositol-anchored membrane isozyme expressed on the luminal surfaces of pulmonary (and certain other) capillaries and proximal renal tubules. Its exact function is not known; however, it may have a role in inherited renal abnormalities of bicarbonate transport. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (1) represents the shorter transcript and encodes the protein.