

Product datasheet for **SC301933**

CA7 (NM_001014435) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CA7 (NM_001014435) Human Untagged Clone
Tag:	Tag Free
Symbol:	CA7
Synonyms:	CA-VII; CAVII
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC301933 representing NM_001014435. Blue=Insert sequence Red=Cloning site Green=Tag(s)

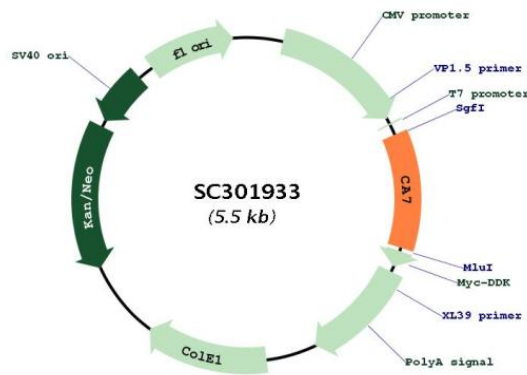
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GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGTCCCTCAGCATACCAACAATGGCCACTCTGTCCAGGTAGACTTCAATGACAGCGATGACCGAACC
GTGGTGACTGGGGGCCCTGGAAGGGCCCTACCGCTCAAGCAGTTTCACTTCCACTGGGGCAAGAAG
CACGATGTGGTTCTGAGCACACGGTGGACGGCAAGTCCCTCCCGAGGAGCTGCATCTGGTTCACTGG
AATGCCAAGAAGTACAGCACTTTGGGGAGGCGGCCTCAGCACCTGATGGCCTGGCTGTGGTTGGTGT
TTTTTGGAGACAGGAGACGAGCACCCAGCATGAATCGTCTGACAGATGCGCTCTACATGGTCCGGTTC
AAGGGCACAAAGCCAGTTCAGCTGCTCAACCCCAAGTGCCTCCTGCCTGCCAGCCGGCACTACTGG
ACCTACCCGGGCTCTCTGACGACTCCCCACTCAGTGAGAGTGTACCTGGATTGTGCTCCGGGAGCCC
ATCTGCATCTCTGAAAGGCAGATGGGGAAGTCCGGAGCCTGCTTTTACCTCGGAGGACGATGAGAGG
ATCCACATGGTGAACAACCTCCGGCCACCACAGCCACTGAAGGGCCGCTGGTAAAGGCCTCCTCCGG
GCCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: SgfI-MluI



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Plasmid Map:



ACCN: NM_001014435

Insert Size: 627 bp

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).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_001014435.1](#)

RefSeq Size: 1715 bp

RefSeq ORF: 627 bp

Locus ID: 766

UniProt ID: [P43166](#)

Cytogenetics: 16q22.1

Protein Families: Druggable Genome

Protein Pathways: Nitrogen metabolism

MW: 23.5 kDa

Gene Summary: Carbonic anhydrases 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. The cytosolic protein encoded by this gene is predominantly expressed in the brain and contributes to bicarbonate driven GABAergic neuron excitation. Alternative splicing in the coding region results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Aug 2018]

Transcript Variant: This variant (2) has a distinct 5' UTR and uses a downstream start codon compared to variant 1. It encodes isoform 2 which has a shorter N-terminus compared to isoform 1. Variants 2 and 3 encode the same protein. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.