

## Product datasheet for SC310537

### CA5B (NM\_007220) Human Untagged Clone

#### Product data:

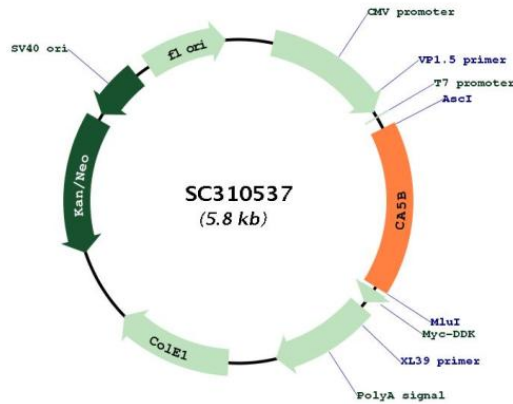
Product Type:	Expression Plasmids
Product Name:	CA5B (NM_007220) Human Untagged Clone
Tag:	Tag Free
Symbol:	CA5B
Synonyms:	CA-VB; CAVB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC310537 representing NM_007220. Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
GTGAACCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCTGACTGGATCCGGTA
CCGAGGAGATCTGCCCGCGCATCGCCGGCGCGCC
ATGGTGGTGATGAACAGCCTGAGGGTCATTCTTCAAGCCTCTCCAGGCAAATTGCTGTGGAGAAAGTTC
CAGATCCGAGATTCATGCCAGCGAGGCCCTGCAGCCTCTATACTTGTACTTACAAAACCGGAACCGA
GCCTTGCATCCACTCTGGGAGAGCGTGGACCTGGTTCTGGGGCGCATCGCCAGTCACCCATCAACATT
CGGTGGAGGGACAGTGTTTATGATCCCGGCTTAAACCACTGACCATCTTATGACCCAGCCACCTGC
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TGGGGTTCTGAGCACACCGTGGACAGCAAATGCTTCCCAGCAGAGCTGCACCTAGTGCATTGGAACGCA
GTCAGATTTGAAAACCTTTGAGGATGCAGCACTGGAAGAAAATGGTTTGGCTGTGATAGGAGTATTTTAA
AAGCTAGGCAAACATCATAAGGAGCTACAGAAATAGTGGATACTTTGCCGTCAATTAAGCATAAGGAC
GCCCTTGTGGAATTTGGGTCAATTTGACCCTTCTCGCTGATGCCTACCTGCCAGATTACTGGACCTAC
TCAGGGTCTCTGACTACCCACCCCTCTCCGAGTCTGTCACTGGATCATTAGAAGCAACCAAGTAGAG
GTTGATCATGATCAGCTTGAGCAATTTCCGACCCTGCTTTTCACTTCCGAAGGGGAGAAAAGAAAAAGA
ATGGTGGACAACCTCCGCCCTTCCAGCCACTGATGAATCGCACTGTTTCGTTTCATCTCCGTCATGAT
TATGTGCTGAATGTACAAGCGAAACCAAGCCGGCCACCAGCCAAGCAACCCCTAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Restriction Sites: AscI-MluI



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**Plasmid Map:**


**ACCN:** NM\_007220

**Insert Size:** 954 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\\_007220.3](#)

**RefSeq Size:** 6032 bp

**RefSeq ORF:** 954 bp

Locus ID:	11238
UniProt ID:	<a href="#">Q9Y2D0</a>
Cytogenetics:	Xp22.2
Domains:	carb_anhydrase
Protein Families:	Druggable Genome
Protein Pathways:	Nitrogen metabolism
MW:	36.4 kDa

**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 carbonic anhydrase 5B. CA5B, and the related CA5A gene, has its expression localized in the mitochondria though CA5B has a wider tissue distribution than CA5A, which is restricted to the liver, kidneys, and skeletal muscle. A carbonic anhydrase pseudogene (CA5BP1) is adjacent to the CA5B gene and these two loci produce CA5BP1-CA5B readthrough transcripts. [provided by RefSeq, Jan 2019]