

Product datasheet for RC207002

CA5B (NM_007220) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CA5B (NM_007220) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CA5B
Synonyms:	CA-VB; CAVB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC207002 representing NM_007220 Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGC
GCC

ATGGTGGTGATGAACAGCCTGAGGGTCATTCTTCAAGCCTCTCCAGGCAAATTGCTGTGGAGAAAGTTCC
AGATTCCGAGATTCATGCCAGCGAGGCCCTGCAGCCTCTATACTTGTACTTACAAAACCCGGAACCGAGC
CTTGATCCACTCTGGGAGAGCGTGGACCTGGTTCCTGGGGCGATCGCCAGTCACCCATCAACATTCGG
TGGAGGGACAGTGTATGATCCCGCTTAAAACCACTGACCATCTTTATGACCCAGCCACCTGCCTCC
ACGTCTGGAATAATGGTACTCTTTCCTCGTGAATTTGAAGATTCTACAGATAAATCAGTGATCAAGGG
AGGACCCCTGGAACACAACACTACCGATTGAAGCAGTTCCATTTTCACTGGGGGCCATCGATGCCTGGGGT
TCTGAGCACACCGTGGACAGCAAATGCTTCCCAGCAGAGCTGCACTTAGTGCAATTGGAACGCAGTCAGAT
TTGAAAATTTGAGGATGCAGCACTGGAAGAAAATGGTTTGGCTGTGATAGGAGTATTTTAAAGCTAGG
CAAACATCATAAGGAGCTACAGAAATTAGTGGATACTTTGCCGTCAATTAAGCATAAGGACGCCCTTGTG
GAATTTGGGTCATTTGACCCTTCTGCCTGATGCCTACCTGCCAGATTACTGGACCTACTCAGGGTCTC
TGACTACCCACCCCTCTCCGAGTCTGTCACCTGGATCATTAAAGAAGCAACCAGTAGAGGTTGATCATGA
TCAGCTTGAGCAATTTCCGACCCTGCTTTTCACTTCCGAAGGGGAGAAAAGAGAAAAGAATGGTGGACAAC
TTCCGCCCTTCAGCCACTGATGAATCGCACTGTTTCGTTTCATCCTTCCGGCATGATTATGTGCTGAATG
TACAAGCGAAACCAAGCCGGCCACCAGCAAGCAACCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC207002 representing NM_007220
Red=Cloning site Green=Tags(s)

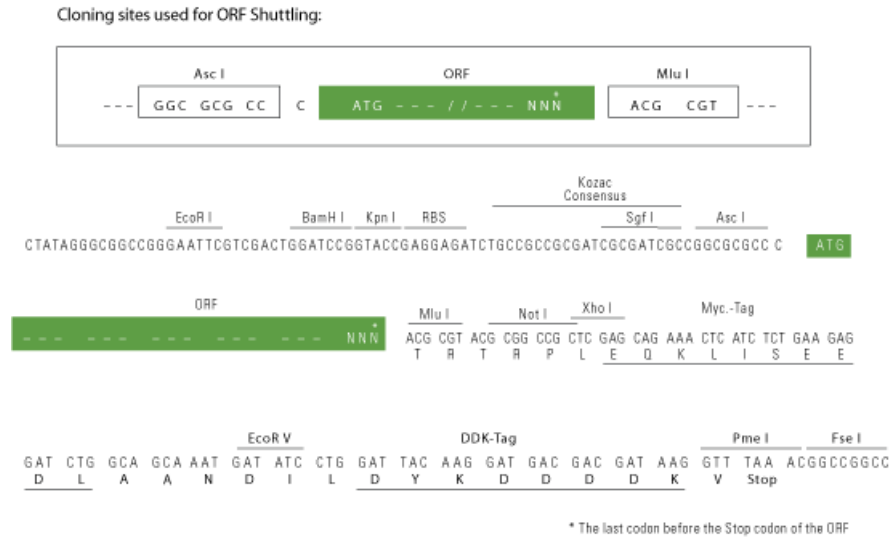
MVVMNSLRVILQASPGKLLWRKFQIPRFMPARPCSLYTCTYKTRNRALHPLWESVDLVPGGDRQSPINIR
 WRDSVYDPGLKPLTISYDPATCLHVWNINGYSFLVEFEDSTDKSVIKGGPLEHNYRLKQFHFWGAIDAWG
 SEHTVDSKCFPAELHLVHWNVRFENFEDAALAEENGLAVIGVFLKLGKHHKELQKLVDTLPSIKHKDALV
 EFGSFDPSCLMPTCPDYWTYSGSLTTPPLSESVTWI IKKQPVEVDHDQLEQFRTLFTSEGEKEKRMVDN
 FRPLQPLMNRTRSSFRHDYVVLNVQAKPKPATSQATP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3796_b06.zip

Restriction Sites: AscI-MluI

Cloning Scheme:



ACCN: NM_007220

ORF Size: 951 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_007220.4](#)

RefSeq Size: 6032 bp

RefSeq ORF: 954 bp

Locus ID: 11238

UniProt ID: [Q9Y2D0](#)

Cytogenetics: Xp22.2

Domains: carb_anhydrase

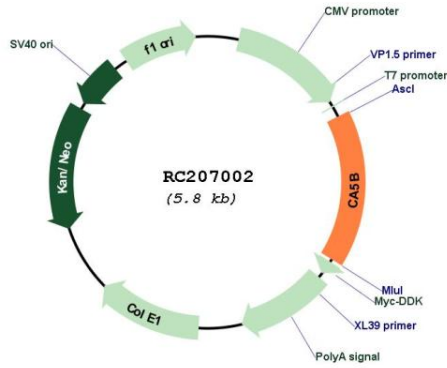
Protein Families: Druggable Genome

Protein Pathways: Nitrogen metabolism

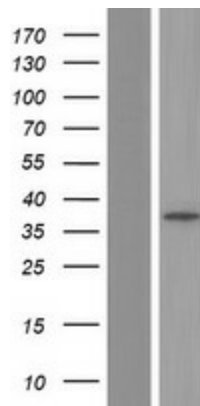
MW: 36.43 kDa

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]

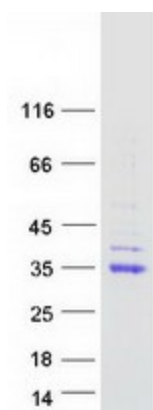
Product images:



Circular map for RC207002



Western blot validation of overexpression lysate (Cat# [LY416110]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207002 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CA5B protein (Cat# [TP307002]). The protein was produced from HEK293T cells transfected with CA5B cDNA clone (Cat# RC207002) using MegaTran 2.0 (Cat# [TT210002]).