

Product datasheet for **RG204810**

CA12 (NM_001218) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CA12 (NM_001218) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CA12
Synonyms:	CA-XII; CAXII; HsT18816; T18816
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204810 representing NM_001218 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCGGCGCAGCCTGCACGGCGGCCGTGCTCCTGCTGGTATCTTAAAGGAACAGCCTTCCAGCC
CGGCCCCAGTGAACGGTCCAAGTGGACTTATTTGGTCTGATGGGAGAATAGCTGGTCCAAGAAGTA
CCCGTCGTGGGGCCCTGCTGCAGTCCCCATAGACCTGCACAGTGACATCCTCCAGTATGACGCCAGC
CTCAGCCCTCGAGTTCAAGGCTACAATCTGTCTGCCAACAAGCAGTTTCTCCTGACCAACAATGGCC
ATTCAGTGAAGCTGAACCTGCCCTCGGACATGCACATCCAGGGCCTCCAGTCTCGCTACAGTGCCACGCA
GCTGCACCTGCACTGGGGGAACCCGAATGACCCGCACGGCTCTGAGCACACCGTCAAGCGGACAGCACTTC
GCCGCCGAGCTGCACATTGTCCATTATAACTCAGACCTTTATCCTGACGCCAGCACTGCCAGCAACAAGT
CAGAAGGCCTCGCTGTCTGGCTGTTCTCATTGAGATGGGCTCCTTCAATCCGTCCTATGACAAGATCTT
CAGTCACTTCAACATGTAAAGTACAAAGGCCAGGAAGCATTCTGCCGGGATTCAACATTGAAGAGCTG
CTTCCGGAGAGGACCGCTGAATATTACCGCTACCGGGGTCCCTGACCACACCCCTTGAACCCCACTG
TGCTCTGGACAGTTTTCCGAAACCCCGTCAAAATTTCCAGGAGCAGCTGCTGGCTTTGGAGACAGCCCT
GACTGCACACATGGACGACCTTCCCCAGAGAAATGATCAACAACCTCCGGCAGGTCCAGAAGTTC
GATGAGAGGCTGGTATACACCTCTCCCAAGTGAAGTCTGACTGCGGCAGGACTGAGCTGGGCA
TCATCCTCACTGGCCCTGGCTGGCATTCTTGGCATCTGTATTGTGGTGGTGTCCATTTGGCTTTT
CAGAAGGAAGAGTATCAAAAAGGTGATAACAAGGGAGTCATTTACAAGCCAGCCACCAAGATGGAGACT
GAGGCCACGCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG204810 representing NM_001218
Red=Cloning site Green=Tags(s)

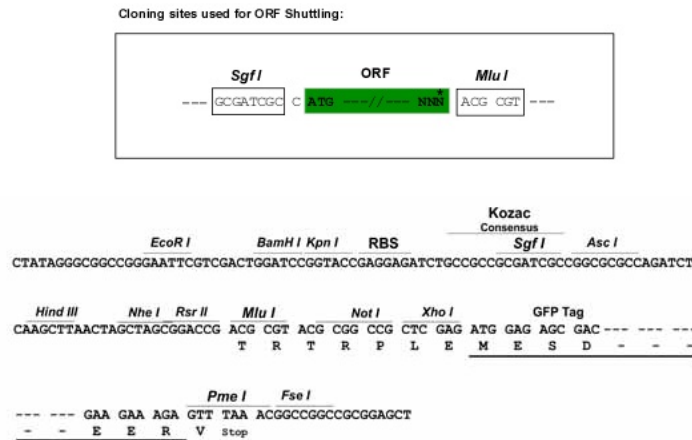
MRRSLHAAVLLLVLKEQPSSPAPVNGSKWTFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQYDAS
 LTPLEFQGYNLSANKQFLLTNNGHSVKLNLPDMHIQGLQSRYSATQLHLHWGNPNDPHGSEHTVSGQHF
 AAELHIVHYNSDLYPDASTASNKSEGLAVLAVLIEMGSFNPSYDKIFSHLQHVKYKGQEA芙蓉VPGFNIEEL
 LPERTA EYYRYRGSLLTPPCNPTVLWTVFRNPVQISQEQLLALETALYCTHMDDPSPREMINNFRQVQKF
 DERLVYTSFSQVQVCTAAGLSLGIILSLALAGILGICIVVVVSIWLFRRKSIKKGDNKGV IYK PATKMET
 EAHA

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001218

ORF Size: 1062 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_001218.5](#)

RefSeq Size: 3992 bp

RefSeq ORF: 1065 bp

Locus ID: 771

UniProt ID: [O43570](#)

Cytogenetics: 15q22.2

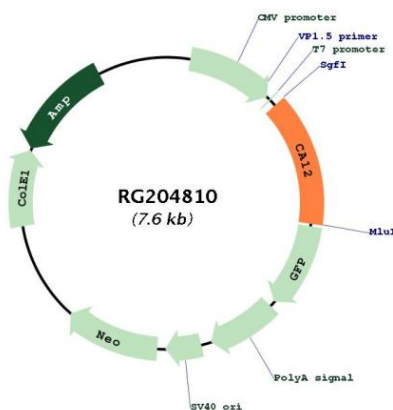
Domains: carb_anhydrase

Protein Families: Druggable Genome, Transmembrane

Protein Pathways: 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. This gene product is a type I membrane protein that is highly expressed in normal tissues, such as kidney, colon and pancreas, and has been found to be overexpressed in 10% of clear cell renal carcinomas. Three transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jun 2014]

Product images:



Circular map for RG204810