

## Product datasheet for **RG237168**

### CA12 (NM\_001293642) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CA12 (NM_001293642) 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:	>RG237168 representing NM_001293642. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCCCGGCGCAGCCTGCACGCGCGGCCGTGCTCCTGCTGGTGATCTTAAAGGAACAGCCTTCCAGC
CCGGCCCCAGTGAACGGTTCCAAGTGGACTTATTTGTGAAGCTGAACCTGCCCTCGGACATGCACATC
CAGGGCCTCCAGTCTCGCTACAGTGCCACGCAGCTGCACCTGCACTGGGGAAACCCGAATGACCCGCAC
GGCTCTGAGCACACCGTCAGCGGACAGCACTTCGCCGCCGAGCTGCACATTGTCCATTAACTCAGAC
CTTTATCCTGACGCCAGCACTGCCAGCAACAAGTCAGAAGGCCTCGCTGTCTGGCTGTTCTCATTGAG
ATGGGCTCCTTCAATCCGTCCTATGACAAGATCTTCAGTCACCTCAACATGTAAAGTACAAAGGCCAG
GAAGCATTCGTCCCGGATTCAACATTGAAGAGCTGCTTCGGGAGAGGACCGCTGAATATTACCGCTAC
CGGGGGTCCCTGACCACACCCCTTGCAACCCACTGTGCTCTGGACAGTTTTCCGAAACCCCGTGCAA
ATTTCCAGGAGCAGCTGCTGGCTTTGGAGACAGCCCTGTACTGCACACACATGGACGACCTTCCCCC
AGAGAAATGATCAACAATTCCGGCAGGTCCAGAAGTTCGATGAGAGGCTGGTATACACCTCCTTCTCC
CAAGGCATCATCCTCTCACTGGCCCTGGCTGGCATTCTTGGCATCTGTATTGTGGTGGTGGTGTCCATT
TGGCTTTTCAGAAGGAAGAGTATCAAAAAAGGTGATAACAAGGGAGTCATTTACAAGCCAGCCACCAAG
ATGGAGACTGAGGCCACGCT
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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**Protein Sequence:** >Peptide sequence encoded by RG237168  
 Blue=ORF Red=Cloning site Green=Tag(s)

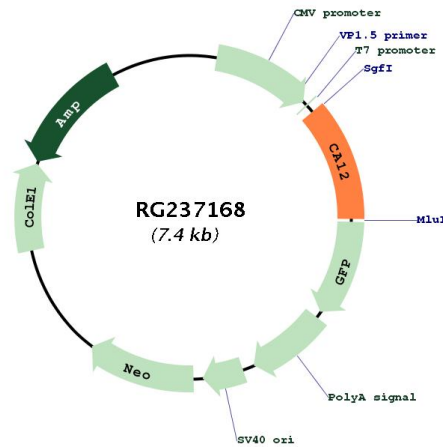
MPRRSLHAAVLLLVLKEQPSSPAPVNGSKWTFVKLNLPSDMHIQGLQSRYSATQLHLHWGNPNDPH  
 GSEHTVSGQHFAAELHIVHNSDLYPDASTASNKSEGLAVLAVLIEMGSFNPSYDKIFSHLQHVKYKQ  
 EAFVPGFNIEELLPERTAEYYRYRGLSTPPCNPTVLWTVFRNPVQISQEQLLALETALYCTHMDDPSP  
 REMINFRQVQKFDERLVYTSFSQGIILSLALAGILGICIVVVVSIWLFRKRSIKKGDNKGVIYKPAK  
 METEAHA  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSTYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPE  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001293642

<b>ORF Size:</b>	849 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>RefSeq:</b>	<a href="#">NM_001293642.1</a> , <a href="#">NP_001280571.1</a>
<b>RefSeq Size:</b>	3996 bp
<b>RefSeq ORF:</b>	852 bp
<b>Locus ID:</b>	771
<b>Cytogenetics:</b>	15q22.2
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Nitrogen metabolism
<b>MW:</b>	31.9 kDa
<b>Gene Summary:</b>	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]