

## Product datasheet for **RG204034**

### CA12 (NM\_206925) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CA12 (NM_206925) 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:	>RG204034 representing NM_206925 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCCGGCGCAGCCTGCACGCGCGGCCGTGCTCCTGCTGGTATCTTAAAGGAACAGCCTTCCAGCC  
CGGCCCCAGTGAACGGTCCAAGTGGACTTATTTGGTCTGATGGGAGAATAGCTGGTCCAAGAAGTA  
CCCGTCGTGGGGCCGTGTCAGTCCCCATAGACCTGCACAGTGACATCCTCCAGTATGACGCCAGC  
CTCAGCCCTCGAGTTCAAGGCTACAATCTGTCTGCCAACAAGCAGTTTCTCCTGACCAACAATGGCC  
ATTCAGTGAAGCTGAACCTGCCCTCGGACATGCACATCCAGGGCCTCCAGTCTCGCTACAGTGCCACGCA  
GCTGCACCTGCACTGGGGGAACCCGAATGACCCGCACGGCTCTGAGCACACCGTCAGCGGACAGCACTTC  
GCCGCCGAGCTGCACATTGTCCATTATAACTCAGACCTTTATCCTGACGCCAGCACTGCCAGCAACAAGT  
CAGAAGGCCTCGCTGTCCTGGCTGTTCTCATTGAGATGGGCTCCTTCAATCCGTCCTATGACAAGATCTT  
CAGTCACTTCAACATGTAAAGTACAAAGGCCAGGAAGCATTCTGCCGGGATTCAACATTGAAGAGCTG  
CTTCCGGAGAGGACCGCTGAATATTACCGCTACCGGGGTCCCTGACCACACCCCTTGCACCCCACTG  
TGCTCTGGACAGTTTTCCGAAACCCGTGCAAAATTTCCAGGAGCAGCTGCTGGCTTTGGAGACAGCCCT  
GACTGCACACATGGACGACCTTCCCCAGAGAAATGATCAACAACCTCCGGCAGGTCCAGAAGTTC  
GATGAGAGGCTGGTATACACCTCTTCCCAAGGCATCATCCTCTCACTGGCCCTGGCTGGCATTCTTG  
GCATCTGTATTGTGGTGGTGTCCATTTGGCTTTTCAGAAGGAAGAGTATCAAAAAGGTGATAACAA  
GGGAGTCATTTACAAGCCAGCCACCAAGATGGAGACTGAGGCCACGCT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204034 representing NM\_206925  
Red=Cloning site Green=Tags(s)

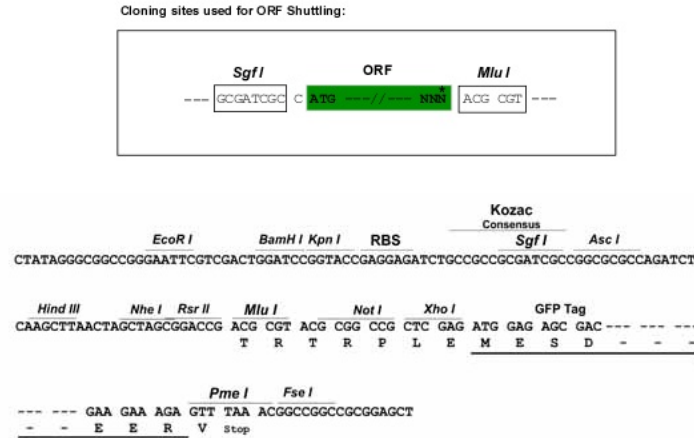
MRRSLHAAAVLLLVLKEQPSSPAPVNGSKWTFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQYDAS  
 LTPLEFQGYNLSANKQFLLTNNGHSVKLNLPSDMHIQGLQSRYSATQLHLHWGNPNDPHGSEHTVSGQHF  
 AAELHIVHYNSDLYPDASTASNKSEGLAVLAVLIEMGSFNPSYDKIFSHLQHVKYKGQEAFFVPGFNIEEL  
 LPERTAEYYRYRGSLLTPPCNPTVLWTVFRNPVQISQEQLLALETALYCTHMDDPSPREMINNFRQVQKF  
 DERLVYTSFSQGIILSLALAGILGICIVVVSIWLFRRKSIKKGDNKGVLYKPKATKMETEAHA

TRTRPLE - GFP Tag - V

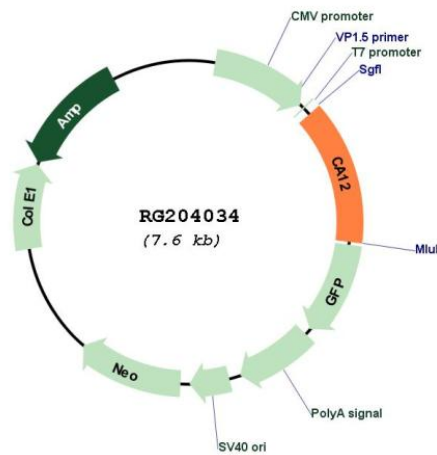
**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_206925

**ORF Size:** 1029 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>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_206925.2</a> , <a href="#">NP_996808.1</a>
<b>RefSeq Size:</b>	3959 bp
<b>RefSeq ORF:</b>	1032 bp
<b>Locus ID:</b>	771
<b>UniProt ID:</b>	<a href="#">O43570</a>
<b>Cytogenetics:</b>	15q22.2
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Nitrogen metabolism
<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]