

## Product datasheet for **RG224623**

### **BACE2 (NM\_138991) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	BACE2 (NM_138991) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BACE2
Synonyms:	AEPLC; ALP56; ASP1; ASP21; BAE2; CDA13; CEAP1; DRAP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224623 representing NM\_138991  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGCGCACTGGCCCGGGCGCTGCTGCTGCCTCTGCTGGCCAGTGGCTCCTGCGCGCCGCCCGGAGC  
 TGGCCCCCGGCCCTTACGCTGCCCTCCGGGTGGCCGCGGCCACGAACCGCGTAGTTGCGCCACCCC  
 GGGACCCGGGACCCTGCCGAGCGCCACGCCGACGGCTTGGCGCTCGCCCTGGAGCTGCCTGGCGTCC  
 CCCGCGGGCGCCCAACTTCTTGGCCATGGTAGACAACCTGCAGGGGACTCTGGCCGCGGCTACTACC  
 TGGAGATGCTGATCGGGACCCCCCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACCTTGC  
 CGTGGCAGGAACCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACATACCCTCC  
 AAGGGCTTTGACGTCACAGTGAAGTACACACAAGGAAGCTGGACGGGCTTCGTTGGGAAGACCTCGTCA  
 CCATCCCCAAAGGCTTCAATACTCTTTTCTTGTCAACATTGCCACTATTTTGAATCAGAGAATTTCTT  
 TTTGCCTGGGATTAATGGAATGGAATACTTGGCCTAGCTTATGCCACACTTGCCAAGCCATCAAGTTCT  
 CTGGAGACCTTCTTCGACTCCCTGGTGACACAAGCAAACATCCCCAACGTTTTCTCCATGCAGATGTGTG  
 GAGCCGGCTTGCCCGTTGCTGGATCTGGGACCAACGGAGGTAGTCTTGTCTTGGGTGGAATTGAACCAAG  
 TTTGTATAAAGGAGACATCTGGTATACCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTTCTGAAA  
 TTGAAATTTGGAGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCCATCGTGGACA  
 GTGGCACACGCTGCTGCGCCTGCCCGAGAAGGTGTTGATGCGGTGGTGAAGCTGTGGCCCGCGCATC  
 TCTGCTTACATTCAGCCATGATGGGGCCCGCCTGAATTATGAATGTTACCGATTGCGCATTTCCCCA  
 TCCACAAATGCGCTGGTATCGGTGCCACGGTATGGAGGGCTTCTACGTCATCTTCGACAGAGCCCGA  
 AGAGGGTGGCTTCGACGCGAGCCCTGTGCAGAAATTGCAGGTGCTGCAGTGTCTGAAATTTCCGGGCC  
 TTTCTCAACAGAGGATGTAGCCAGCAACTGTGTCCCGCTCAGTCTTTGAGCGAGCCCATTTTGTGGATT  
 GTGTCCTATGCGCTCATGAGCGTCTGTGGAGCCATCCTCCTTGTCTTAATCGTCCTGCTGCTGCTGCCGT  
 TCCGGTGTGAGCGTCCGCCCGTGACCCTGAGGTGCTCAATGATGAGTCCTCTGGTCAGACATCGCTG  
 GAAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG224623 representing NM\_138991  
 Red=Cloning site Green=Tags(s)

MGALARALLPLLAQWLLRAAPELAPAPFTLPLRVAAATNRVVAPTGPPTPAERHADGLALALEPALAS  
 PAGAANFLAMVDNLQDSSGRGYYLEMLIGTPPQKLQILVDTGSSNFAVAGTPHYSIDTYFDTERSSTYRS  
 KGFDTVVKYQTQGSWTGFVGEDLVTIPKGFNTSFLVNIATIFESENFLLPGIKWNGILGLAYATLAKPSS  
 LETFFDSLVTQANIPNVFSMQMCGAGLPVAGSGTNGGSLVLGGIEPSLYKGDIIWYTPIKEEWWWYQIEILK  
 LEIGGQSLNLDREYNADKAIIVDSGTTLLRPLQKVFDAVVEAVARASLLYIQPMMGAGLNYECYRFGISP  
 STNALVIGATVMEGFYVIFDRAQKRVGFAASPCAEIAGAAVSEISGPFSTEDVASNCVPAQSLSEPIILWI  
 VSYALMSVCGAILLVLLVLLLPFRQRPRDPEVVNDESSLVRHRWK

**TRTRPLE** - GFP Tag - V

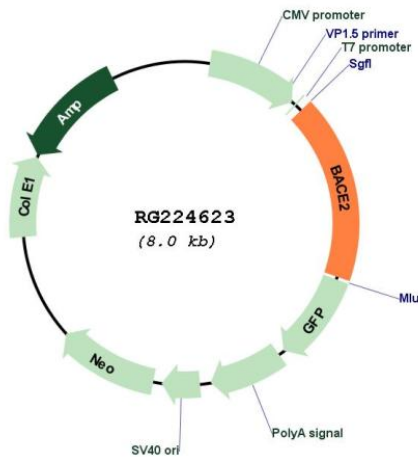
**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_138991

**ORF Size:** 1404 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\\_138991.3](#)

**RefSeq Size:** 2843 bp

**RefSeq ORF:** 1407 bp

**Locus ID:** 25825

**UniProt ID:** [Q9Y5Z0](#)

**Cytogenetics:** 21q22.2-q22.3

**Protein Families:** Druggable Genome, Protease, Transmembrane

**Protein Pathways:** Alzheimer's disease

**Gene Summary:** This gene encodes an integral membrane glycoprotein that functions as an aspartic protease. The encoded protein cleaves amyloid precursor protein into amyloid beta peptide, which is a critical step in the etiology of Alzheimer's disease and Down syndrome. The protein precursor is further processed into an active mature peptide. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]