

Product datasheet for **RG222498**

Proprotein Convertase 2 (PCSK2) (NM_002594) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Proprotein Convertase 2 (PCSK2) (NM_002594) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Proprotein Convertase 2
Synonyms:	NEC-2; NEC 2; NEC2; PC2; SPC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG222498 representing NM_002594
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGGGTGGTTGTGTCTCCAGTGAAGGCGGCCGGGTTCTCTTCTGTGTGATGGTTTTTGCAT
 CTGCTGAGCGACCGGTCTTCACGAATCATTCTTGTGGAGTTGCATAAAGGGGGAGAGGACAAAGCTCG
 CCAAGTTGCAGCAGAACACGGCTTTGGAGTCCGAAAGCTTCCCTTTGCTGAAGGTCTGTACCACTTTTAT
 CACAATGGCCTTGCAAAGGCCAAGAGAAGACGACGCTACACCACAAGCAGCAGCTGGAGAGAGACCCCA
 GGGTAAAGATGGCTTTCAGCAGGAAGGATTTGACCGAAAAAGCGAGGTTACAGAGACATCAATGAGAT
 CGACATCAACATGAACGATCCTCTTTTTACAAAGCAGTGGTATCTGATCAATACTGGCAAGCTGATGGC
 ACTCTGGCCTTGATTTGAATGTGGCTGAAGCCTGGGAGCTGGGATACACAGGAAAGGTGTACCATTG
 GAATTATGGATGATGGGATTGACTATCTCCACCCGGACCTGGCCTCCAATAAATGCCGAAGCAAGTTA
 CGACTTCAGCAGCAACGACCCCTATCCTTACCCTCGGTACACAGATGACTGGTTTAAACAGCCACGGGACC
 CGATGTGCAGGAGAAGTTCTGTCTGCCGCAACAACAATATCTGTGGAGTTGGAGTAGCATACAACCTCCA
 AGGTTGCAGGCATCCGGATGCTGGACCAGCCATTCATGACAGACATCATCGAGGCCTCTCCATCAGTCA
 TATGCCACAGCTGATTGACATCTACAGCGCCAGCTGGGGCCCCACAGACAACGGCAAGACAGTGGATGGG
 CCCCAGGAGCTCACGCTGCAGGCCATGGCCGATGGCGTGAACAAGGGCCGCGGGCAAGGCAGCATCT
 ACGTGTGGGCTCCGGGACGGCGGACGCTATGACGACTGCAACTGCGACGGCTACGCTCCAGCATGTG
 GACCATCTCCATCAACTCAGCCATCAACGACGGCAGGACTGCCCTGTACGACGAGAGCTGCTCTCCACC
 TTGGCTTCCACCTTCAGCAACGGGAGGAAAAGGAACCCCGAGGCCGTTGGCAACCACAGATTTGTACG
 GCAACTGCACCTGAGGCATTCTGGGACATCTGCAGCTGCCCCGAGGCAGCTGGTGTGTTGCACTGGC
 TCTGGAGGCTAACCTGGGTCTGACCTGGCGGGACATGCAGCATCTGACTGTGCTCACCTCCAACCGGAAC
 CAGCTTACGACGAGGTCCATCAGTGGCGGCGCAATGGGGTGGCCTGGAATTTAATCACCTCTTTGGCT
 ACGGGTCTTGTATGCAGGTGCCATGGTAAAATGGCTAAAGACTGAAAAACCGTGCCTGAGAGATTCCA
 CTGTGTGGGAGGCTCCGTGCAGGACCCTGAGAAAATACCATCCACTGGCAAGTTGGTGTGACACTCACA
 ACCGACGCTGTGAGGGGAAGGAAAATTTGTCCGCTACCTGGAGCATGTCCAGGCTGTATCACGGTCA
 ACGCAACCAGAAGAGGAGACCTGAACATCAACATGACTTCCCCTATGGGCACCAAGTCCATTTTGTGAG
 CCGGCTCAAGGGATGACGACTCCAAGGTGGGCTTTGACAAGTGGCCTTTCATGACCACTCACAGTGG
 GGGGAAGACGCCGAGGACCTGGACCTGGAGCTGGGATTTGTGGCAGCGCCCGCAGAAAGGGGTGC
 TGAAGGAGTGGACCTGATGCTGATGGCACTCAGAGTGGCCGTACATCGACCAGGTGGTGGGGATTA
 CAGTCCAAGTTGGCCATGTCCAAGAAAGAGGAGCTGGAGGAAGAGCTGGACGAAGCCGTGGAGAGAAG
 CTGAAAAGCATCCTTAACAAGAAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG222498 representing NM_002594
 Red=Cloning site Green=Tags(s)

MKGGCVSQWKAAGFLFCVMVFAAERPVFTNHFLVELHKGGEDKARQVAEHLGFGVRKLPFAEGLYHFY
 HNGLAKAKRRRSLHKKQLERDPRVKMALQQEGFDRKKRGYRDINEIDINMNDPLFTKQWYLINTGQADG
 TPGLDLNVAEAWELGYTGKGVITIGIMDDGIDYLHPDLASNYNAEASYDFSSNDPYPYPRYTDDWFNSHGT
 RCAGEVSAANNNICGVGVAYNSKVAGIRMLDQPFMTDIEASSISHMPQLIDIYASWGPDTNKGTVDG
 PRELTLQAMADGVNKGKGGKSIYVWASGDGGSYDDCNCDDGYASSMWTISINSAINDGRTALYDESCSST
 LASTFSNGRKRNPAGVATTDLYGNCTLRHSGTSAAPAAAGVFALEALANLGLTWRDMQHLTVLTSKRN
 QLHDEHVHQRNRNGVLEFNHLFGYGVLDAGAMVKMAKDWKTVPERFHCVGGSVQDPEKIPSTGKLVLT
 TDACEGKENVRYLEHVQAVITVNATRRGDLNINMTSPMGTKSILLRRPRDDDSKVGFDPWFMTHTW
 GEDARGTWLELGFVGSAPQKGVLEKWTMLHGTQSAPYIDQVVRDYQSKLAMSKKEELEEELDEAVERS
 LKSILNKN

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



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                                     Kozac
                                     Consensus
                                     Sgf I   Asc I
EcoR I   BamH I Kpn I   RBS   -----
CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCCAGATCT

Hind III   Nhe I   Rsr II   Mlu I   Not I   Xho I   GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG   ACG CGT   ACG CGG   CCG CTC GAG   ATG GAG AGC GAC -----
                                     T   R   T   R   P   L   E   M   E   S   D   -   -   -

Pme I   Fse I
----- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
- - - E E R V Stop
    
```

ACCN: NM_002594

ORF Size: 1914 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_002594.5](#)

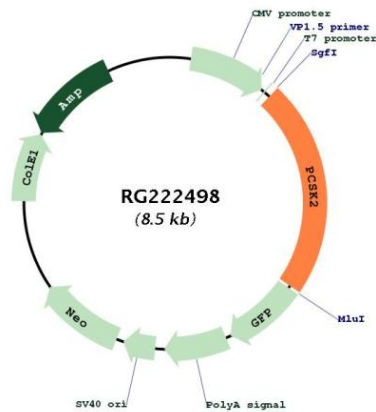
RefSeq Size: 4745 bp

RefSeq ORF: 1917 bp

Locus ID: 5126

UniProt ID: [P16519](#)

Cytogenetics:	20p12.1
Domains:	Peptidase_S8, P
Protein Families:	Druggable Genome, Protease, Secreted Protein
Gene Summary:	<p>This gene encodes a member of the subtilisin-like proprotein convertase family, which includes proteases that process protein and peptide precursors trafficking through regulated or constitutive branches of the secretory pathway. The protein undergoes an initial autocatalytic processing event and interacts with a neuroendocrine secretory protein in the ER, exits the ER and sorts to secretory granules, where it is cleaved and catalytically activated during intracellular transport. The encoded protease is packaged into and activated in dense core secretory granules and expressed in the neuroendocrine system and brain. This gene encodes one of the seven basic amino acid-specific members which cleave their substrates at single or paired basic residues. It functions in the proteolytic activation of polypeptide hormones and neuropeptides precursors. Single nucleotide polymorphisms in this gene may increase susceptibility to myocardial infarction and type 2 diabetes. This gene may also play a role in tumor development and progression. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Jan 2014]</p>

Product images:


Circular map for RG222498