OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC222498

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:	Myc-DDK
Symbol:	Proprotein Convertase 2
Synonyms:	NEC-2; NEC 2; NEC2; PC2; SPC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC222498 representing NM_002594
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGGGTGGTTGTGTCTCCCAGTGGAAGGCGGCCGCCGGGTTCCTCTTCTGTGTCATGGTTTTTGCAT
CTGCTGAGCGACCGGTCTTCACGAATCATTTTCTTGTGGAGTTGCATAAAGGGGGAGAGGACAAAGCTCG
CCAAGTTGCAGCAGAACACGGCTTTGGAGTCCGAAAGCTTCCCTTTGCTGAAGGTCTGTACCACTTTTAT
CACAATGGCCTTGCAAAGGCCAAGAGAAGACGCAGCCTACACCACAAGCAGCAGCTGGAGAGAGACCCCA
GGGTAAAGATGGCTTTGCAGCAGGAAGGATTTGACCGAAAAAAGCGAGGTTACAGAGACATCAATGAGAT
CGACATCAACATGAACGATCCTCTTTTTACAAAGCAGTGGTATCTGATCAATACTGGGCAAGCTGATGGC
ACTCCTGGCCTTGATTTGAATGTGGCTGAAGCCTGGGAGCTGGGATACACAGGGAAAGGTGTTACCATTG
GAATTATGGATGATGGGATTGACTATCTCCACCCGGACCTGGCCTCCAACTATAATGCCGAAGCAAGTTA
CGACTTCAGCAGCAACGACCCCTATCCTTACCCTCGGTACACAGATGACTGGTTTAACAGCCACGGGACC
CGATGTGCAGGAGAAGTTTCTGCTGCCGCCAACAACAATATCTGTGGAGTTGGAGTAGCATACAACTCCA
AGGTTGCAGGCATCCGGATGCTGGACCAGCCATTCATGACAGACATCATCGAGGCCTCCTCCATCAGTCA
TATGCCACAGCTGATTGACATCTACAGCGCCAGCTGGGGCCCCACAGACAACGGCAAGACAGTGGATGGG
CCCCGGGAGCTCACGCTGCAGGCCATGGCCGATGGCGTGAACAAGGGCCGCGGCGGCAAAGGCAGCATCT
ACGTGTGGGCCTCCGGGGACGGCGGCAGCTATGACGACTGCAACTGCGACGGCTACGCCTCCAGCATGTG
GACCATCTCCATCAACTCAGCCATCAACGACGGCAGGACTGCCCTGTACGACGAGAGCTGCTCTTCCACC
TTGGCTTCCACCTTCAGCAACGGGAGGAAAAGGAACCCCGAGGCCGGTGTGGCAACCACAGATTTGTACG
GCAACTGCACTCTGAGGCATTCTGGGACATCTGCAGCTGCCCCCGAGGCAGCTGGTGTGTTTGCACTGGC
TCTGGAGGCTAACCTGGGTCTGACCTGGCGGGACATGCAGCATCTGACTGTGCTCACCTCCAAACGGAAC
CAGCTTCACGACGAGGTCCATCAGTGGCGGCGCAATGGGGTCGGCCTGGAATTTAATCACCTCTTTGGCT
ACGGGGTCCTTGATGCAGGTGCCATGGTGAAAATGGCTAAAGACTGGAAAACCGTGCCTGAGAGATTCCA
CTGTGTGGGAGGCTCCGTGCAGGACCCTGAGAAAATACCATCCACTGGCAAGTTGGTGCTGACACTCACA
ACCGACGCCTGTGAGGGGAAGGAAAATTTTGTCCGCTACCTGGAGCATGTCCAGGCTGTCATCACGGTCA
ACGCAACCAGAAGAGGAGACCTGAACATCAACATGACTTCCCCTATGGGCACCAAGTCCATTTTGCTGAG
CCGGCGTCCAAGGGATGACGACTCCAAGGTGGGCTTTGACAAGTGGCCTTTCATGACCACTCACACGTGG
GGGGAAGACGCCCGAGGCACCTGGACCCTGGAGCTGGGATTTGTCGGCAGCGCCCCGCAGAAGGGGTGC
TGAAGGAGTGGACCCTGATGCTGCATGGCACTCAGAGTGCCCCGTACATCGACCAGGTGGTGCGGGATTA
CCAGTCCAAGTTGGCCATGTCCAAGAAAGAGGAGCTGGAGGAAGAGCTGGACGAAGCCGTGGAGAGAAGC
CTGAAAAGCATCCTTAACAAGAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222498 representing NM_002594
Red=Cloning site Green=Tags(s)

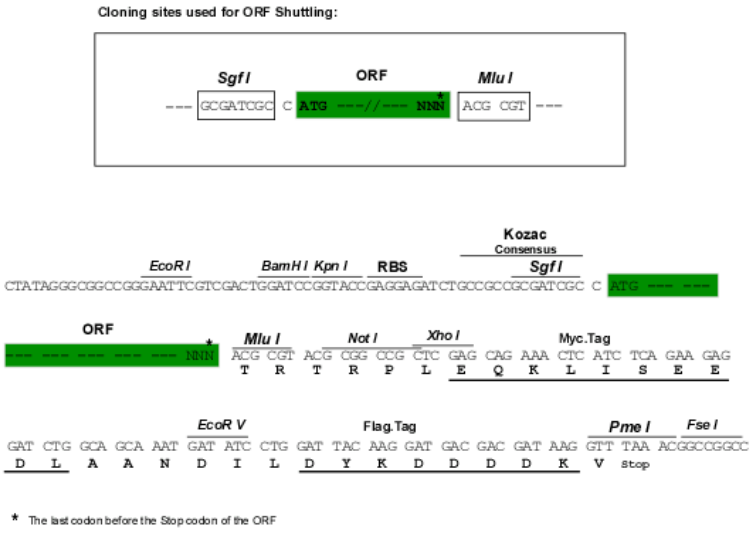
MKGGCVSQWKAAAGFLFCVMVFASAERPVFTNHFLVELHKGGEDKARQVAAEHGFGVRKLPFAEGLYHFY
HNGLAKAKRRRSLHHKQQLERDPRVKMALQQEGFDRKKRGYRDINEIDINMNDPLFTKQWYLINTGQADG
TPGLDLNVAEAWELGYTGKGVTIGIMDDGIDYLHPDLASNYNAEASYDFSSNDPYPYPRYTDDWFNSHGT
RCAGEVSAAANNNICGVGVAYNSKVAGIRMLDQPFMTDIIEASSISHMPQLIDIYSASWGPTDNGKTVDG
PRELTLQAMADGVNKGRGGKGSIYVWASGDGGSYDDCNCDGYASSMWTISINSAINDGRTALYDESCSST
LASTFSNGRKRNPEAGVATTDLYGNCTLRHSGTSAAAPEAAGVFALALEANLGLTWRDMQHLTVLTSKRN
QLHDEVHQWRRNGVGLEFNHLFGYGVLDAGAMVKMAKDWKTVPERFHCVGGSVQDPEKIPSTGKLVLTLT
TDACEGKENFVRYLEHVQAVITVNATRRGDLNINMTSPMGTKSILLSRRPRDDDSKVGFDKWPFMTTHTW
GEDARGTWTLELGFVGSAPQKGVLKEWTLMLHGTQSAPYIDQVVRDYQSKLAMSKKEELEEELDEAVERS
LKSILNKN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6238_d02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002594

ORF Size: 1914 bp

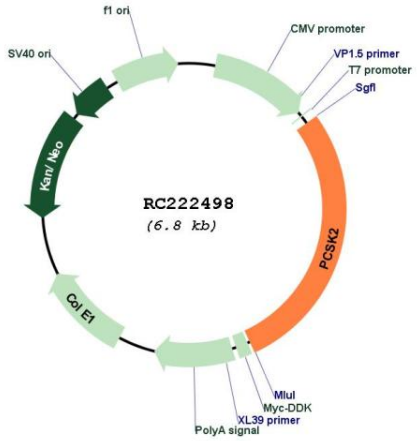
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

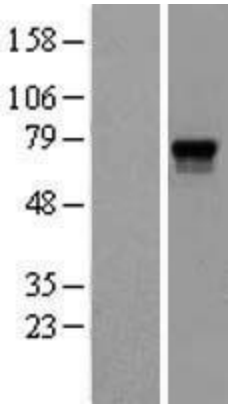
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
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
MW:	70.57 kDa
Gene Summary:	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]

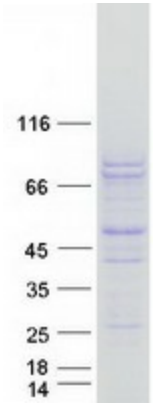
Product images:



Circular map for RC222498



Western blot validation of overexpression lysate (Cat# [LY419211]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222498 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PCSK2 protein (Cat# [TP322498]). The protein was produced from HEK293T cells transfected with PCSK2 cDNA clone (Cat# RC222498) using MegaTran 2.0 (Cat# [TT210002]).