

## Product datasheet for **RG217128**

### **PACE4 (PCSK6) (NM\_002570) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PACE4 (PCSK6) (NM_002570) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PACE4
Synonyms:	PACE4; SPC4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG217128 representing NM\_002570  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCTCCGCGCGCGCCGCTGCGCCCGGGCCCGCGCCCGCCCGGGCCGCGCCGCCACCGACACCG  
 CCGCGGGCGCGGGGGCGCGGGGGCGCGGGGGCGCGGGGGCCGGTTCCGCGCGCTCGCGCCGCG  
 TCCTGGCGCTGGCTGCTGCTGCTGGCGCTGCCTGCCGCTGCTCCGCGCCCGCGCGCCCGCTAC  
 ACCAACCACTGGGCGGTGCAAGTCTGGGCGGCCGCGGAGGCGGACCGGTGGCGGCGCGCACGGGT  
 ACCTCAACTTGGGCCAGATTGGAACCTGGAAGTACTACCATTTTTATCACAGCAAACCTTTAAAG  
 ATCAACCTTGAGTAGCAGAGGCCCTCACACCTTCTCAGAATGGACCCCAAGGTGAAATGGCTCCAGCA  
 CAGGAAGTGAACGAAGGTGAAGAGACAGGTGCGAAGTACCCGACGGCCCTTACTTCAACGACCCCA  
 TTTGGTCCAACATGTGGTACCTGCATTGTGGCGACAAGAAGTGCCTGCCGGTCCGAAATGAATGTCCA  
 GGCAGCGTGAAGAGGGGCTACACAGAAAAAACGTGGTGGTACCATCCTTGATGATGGCATAGAGAGA  
 AATCACCTGACCTGGCCCAAATTATGATTCCTACGCCAGCTACGACGTGAACGGCAATGATTATGACC  
 CATCTCCACGATATGATGCCAGCAATGAAAATAAACACGGCACTCGTTGTGCGGGAGAAGTTGCTGCTT  
 AGCAAAACAATTCCTACTGCATCGTGGGCATAGCGTACAATGCCAAAATAGGAGGCATCCGCATGCTGGAC  
 GGCGATGTCACAGATGTGGTCGAGGCAAAGTGCCTGGGCATCAGACCCAACTACATCGACATTTACAGT  
 CCAGCTGGGGGCCGACGACGACGGCAAGACGGTGGACGGGCCCGGGCCGACTGGCTAAGCAGGCTTTGCA  
 GTATGGCATTAAAAAGGGCCGCGAGGGCCTGGGCTCCATTTTCGTCGCGCATCTGGGAATGGCGGGAGA  
 GAGGGGGACTACTGCTCGTGGATGGCTACACCAACAGCATACACCATCTCCGTCAGCAGCGCCACCG  
 AGAATGGCTACAAGCCCTGGTACCTGGAAGAGTGTCCACCCCTGGCCACCCTACAGCAGTGGGGC  
 CTTTTATGAGCGAAAAATCGTCACCACGGATCTGCGTCAGCGCTGTACCGATGGCCACACTGGGACCTCA  
 GTCTCTGCCCCATGGTGGCGGCATCATCGCCTTGGCTCTAGAAGCAAAACAGCCAGTTAACCTGGAGGG  
 ACGTCCAGCACCTGCTAGTGAAGACATCCCGCCGGCCCACTGAAAGCGAGCGACTGGAAGTGAACGG  
 CGCGGGTCATAAAGTTAGCCATTTCTATGGATTTGGTTTGGTGGACGAGAAGCTCTCGTTGTGGAGGCA  
 AAGAAGTGGACAGCAGTCCATCGCAGCACATGTGTGGCCGCTCGGACAAGAGACCCAGGAGCATCC  
 CCTTAGTGCAGGTGCTGCGGACTACGGCCCTGACCAGCGCTGCGCGGAGCACTCGGACCAGCGGGTGGT  
 CTACTTGGAGCACGTGGTGGTTCGCACCTCCATCTCACACCCACGCGAGGAGACCTCCAGATCTACCTG  
 GTTTCTCCCTCGGAACCAAGTCTCAACTTCTGGCAAAGAGGTTGCTGGATCTTTCCAATGAAGGGTTTA  
 CAAACTGGGAATTCATGACTGTCCACTGCTGGGAGAAAAAGGCTGAAGGGCAGTGGACCTTGAAATCCA  
 AGATCTGCCATCCAGGTCCGCAACCCGGAGAAGCAAGGGAAGTTGAAAGAATGGAGCCTCATACTGTAT  
 GGCACAGCAGAGCACCCGTACCACACCTTCAGTGCCCATCAGTCCCGCTCGCGGATGCTGGAGCTCTCAG  
 CCCCAGAGCTGGAGCCACCAAGGCTGCCTGTACCCTCCAGGTGGAAGTTCTGAAGATGAGGAAGA  
 TTACACAGCTCAATCCACCCAGGCTCTGCTAATATTTTACAGACCAGTGTGTGCCATCCGGAGTGTGGT  
 GACAAAGGCTGTGATGGCCCAATGCAGACCAGTGTGAACTGCGTCCACTTCAGCCTGGGGAGTGTCA  
 AGACCAGCAGGAAGTGCCTGAGTGTGTGCCCTTGGGCTACTTTGGGGACACAGCAGCAAGACGCTGTG  
 CCGGTGCCACAAGGGGTGTGAGACCTGCTCCAGCAGAGCTGCGACGCAAGTGCCTTGTCCGCGCGGG  
 TTCTATCACACCAGGAGATGAACACCTGTGTGACCCTCTGTCCCTGCAGGATTTTATGCTGATGAAAGTC  
 AGAAAAATTGCCCTTAAATGCCACCAAGCTGTAAGAAAGTGCCTGGATGAACCTGAGAAATGACTGTCTG  
 TAAAGAAGGATTCAGCCTTGACGGGCGAGCTGCATTCTGACTGTGAGCCAGGCACCTACTTTGACTCA  
 GAGCTGATCAGATGTGGGAATGCCATCACACCTGCGGAACCTGCGTGGGGCCAGGCAGAGAAGAGTGCA  
 TTCCTGTGCGAAAAACTTCCACTTCCACGACTGGAAGTGTGTGCCAGCCTGTGGTGAAGGCTTCTACCC  
 AGAAGAGATGCCGGGCTTCCCCACAAAGTGTGTCGAAGGTGTGACGAGAAGTGTGAGCTGTGCAGGC  
 TCCAGCAGGAAGTGTAGCAGGTGAAGACGGGCTTACACAGCTGGGACCTCCTGCATACCAACCACA  
 CGTGCAGCAACGCTGACGAGACATCTGCGAGATGGTGAAGTCCAACCGCTGTGCGAACGAAGCTCTT  
 CATTAGTTCTGCTGCCGACGTGCCTCCTGGCCGGG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:** >RG217128 representing NM\_002570  
 Red=Cloning site Green=Tags(s)

MPPRAPPAPGPRPPPRAAAAATDTAAGAGGAGGAGGAGGPGFRPLAPRPWRWLLLLALPAACSAPPPRPVY  
 TNHWAQVVLGGPAEADRVAAAAGYLNGLQIGNLEDYYHFYHSKTFKRSTLSSRGPHTFLRMDPQVKWLQQ  
 QEVKRRVKRQVRSDPQALYFNDP IWSNMWYLHCGDKNSRCRSEMNVQAAWKRGYTGKNVVVTILDGIERL  
 NHPDLAPNYDSYASYDVNGNDYDPSPRYDASNENKHGTRCAGEVAASANNYSYCVGIAYNAKIGGI RMLD  
 GDVTDVVEAKSLGIRPNYIDIIYSASWGPDDDGKTVDGPGR LAKQAFEYGIKKGRQLGSI FVWASNGGR  
 EGDYCS CDGYTNSIYTI SVSSATENGYKPWYLEECAS TLATTYSSGAFYERKIVTTDLRQRCTDGHGTGS  
 VSAPMVAGI IALALEANSQ L TW RDVQHLLVKTSRPAHLKASDWKVNAGHKVSHFYGFGLVDAEALVVEA  
 KKWTAVPSQHMCVAASDKRPRSIPLVQVLR T TALT SACAEHSDQRVVYLEHVVVVRTSISHPRRGDLQIYL  
 VSPSGTKS QLLAKRLDL SNEGF TNWFM TVHCWGEKAEGQWTL EIQDLPSQVRNPEKQGK LKEWSLILY  
 GTA EHPYHTFSAHQSRSMLEL SAPELEPPKAALSPSQVEVPEDEEDYTAQSTPGSANILQTSVCHPECG  
 DKGCDGPNADQCLNCFVHSLGSVKTSRKCVSVCPLGYFGDTAARRCRRCHKGCETCSSRAATQCLSCRRG  
 FYHHQEMNNTCVTLCPAGFYADESQKNCLKCHPSCKKCVDEPEKCTVCKEGFSLARGSCIPDCEPGTYFDS  
 ELIRCGECHHTCGTCVGPREEC IHC AKNFHFDWKVPACGEGFYPEEMPGLPHKVCRRCDENCLSCAG  
 SSRNCSRCKTGFTQLGTSCITNHTCSNADETFCEMVKSNRLCERKLFIQFC CRTCLLAG

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002570

**ORF Size:** 2907 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_002570.5](#)

**RefSeq Size:** 4559 bp

**RefSeq ORF:** 2910 bp

**Locus ID:** 5046

**UniProt ID:** [P29122](#)

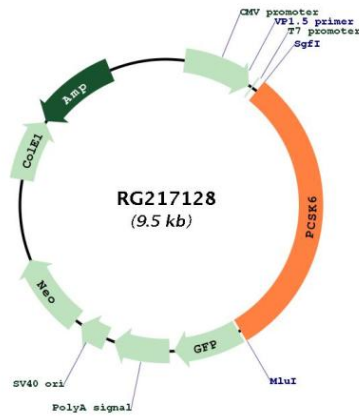
**Cytogenetics:** 15q26.3

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

**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 encoded protein undergoes an initial autocatalytic processing event in the ER to generate a heterodimer which exits the ER and sorts to the trans-Golgi network where a second autocatalytic event takes place and the catalytic activity is acquired. The encoded protease is constitutively secreted into the extracellular matrix and expressed in many tissues, including neuroendocrine, liver, gut, and brain. This gene encodes one of the seven basic amino acid-specific members which cleave their substrates at single or paired basic residues. Some of its substrates include transforming growth factor beta related proteins, proalbumin, and von Willebrand factor. This gene is thought to play a role in tumor progression and left-right patterning. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Feb 2014]

**Product images:**



Circular map for RG217128