

## Product datasheet for **RG206548**

### PSMA (FOLH1) (NM\_001014986) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PSMA (FOLH1) (NM_001014986) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PSMA
Synonyms:	FGCP; FOLH; GCP2; GCPII; mGCP; NAALAD1; NAALAdase; PSM; PSMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG206548 representing NM\_001014986  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGGAATCTCCTTCACGAAACCGACTCGGCTGTGGCCACCGCGCCGCCCGCTGGCTGTGCGCTG  
 GGGCGCTGGTGTGGCGGTGGCTTCTTCTCCTCGGCTTCTCTTCGGGTGTTTATAAAATCCTCCAA  
 TGAAGCTACTAACATTACTCCAAAGCATAATATGAAAGCATTCTTGGATGAATTGAAAGCTGAGAACATC  
 AAGAAGTCTTATATAATTTTACACAGATACCACATTTAGCAGGAACAGAACAAAATTTTTCAGCTTGCAA  
 AGCAAATTCATCCAGTGGAAGAATTTGGCCTGGATTCTGTTGAGCTAGCACATTATGATGTCCTGTT  
 GTCCTACCCAAATAAGACTCATCCCACTACATCTCAATAATTAATGAAGATGGAATGAGATTTTCAAC  
 ACATCATTATTTGAACCCTCTCCAGGATATGAAAATGTTTCGGATATTGTACCACCTTTCAGTGCTT  
 TCTCTCCTCAAGGAATGCCAGAGGGCGATCTAGTGTATGTTAACTATGCACGAACTGAAGACTTCTTTAA  
 ATTGGAACGGGACATGAAAATCAATTGCTCTGGGAAAATTGTAATTGCCAGATATGGGAAAGTTTTCAGA  
 GAAAATAAGGTTAAAAATGCCAGCTGGCAGGGGCCAAAAGGAGTCATTCTACTCCGACCTTGCTGACT  
 ACTTTGCTCCTGGGGTGAAGTCCTATCCAGATGGTTGGAATCTTCTGGAGGTGGTGTCCAGCGTGGAAA  
 TATCCTAAATCTGAATGGTGCAGGAGACCTCTCACACAGGTTACCCAGCAAATGAATATGCTTATAGG  
 CGTGGAATTGCAGAGGCTGTTGGTCTTCCAAGTATTCCTGTTTCATCCAATTGGATACTATGATGCACAGA  
 AGCTCCTAGAAAAATGGGTGGCTCAGCACCACAGATAGCAGCTGGAGAGGAAGTCTCAAAGTGCCTCA  
 CAATGTTGGACCTGGCTTACTGGAACTTTTCTACACAAAAGTCAAGATGCACATCCACTCTACCAAT  
 GAAGTGACAAGAATTTACAATGTGATAGTACTCTCAGAGGAGCAGTGGAAACAGACAGATATGTCATTC  
 TGGGAGGTCACCGGGACTCATGGGTGTTTGGTGGTATTGACCCTCAGAGTGGAGCAGCTGTTGTTTCATGA  
 AATTGTGAGGAGCTTTGGAACACTGAAAAAGGAAGGGTGGAGACCTAGAAGAACAATTTTGTTCGAAGC  
 TGGGATGCAGAAGAATTTGGTCTTCTTGGTCTACTGAGTGGGCAGAGGAGAATTCAGACTCCTTCAAG  
 AGCGTGGCGTGGCTTATATTAATGCTGACTCATCTATAGAAGGAAACTACACTCTGAGAGTTGATTGTAC  
 ACCGCTGATGTACAGCTTGGTACACAACCTAACAAAAGAGCTGAAAAGCCCTGATGAAGGCTTTGAAGGC  
 AAATCTCTTTATGAAAGTTGGACTAAAAAAGTCTTCCCGAGGTTTCAGTGGCATGCCAGGATAAGCA  
 AATTGGGATCTGGAAATGATTTTGGAGTGTCTTCCAACGACTTGAATGCTTCAGGCAGAGCACGGTA  
 TACTAAAAATTTGGAAACAAACAATTCAGCGGCTATCCACTGTATCACAGTGTCTATGAAACATATGAG  
 TTGGTGGAAAAGTTTATGATCCAATGTTTAAATATCACCTCACTGTGGCCAGGTCGAGGAGGGATGG  
 TGTTTGAGCTAGCCAATCCATAGTGTCCCTTTTGATTGTCGAGATTATGCTGTAGTTTAAAGAAAGTA  
 TGCTGACAAAATCTACAGTATTTCTATGAAACATCCACAGGAAATGAAGACATACAGTGTATCATTGAT  
 TCACTTTTTTCTGCAGTAAAGAATTTTACAGAAATGCTTCCAAGTTCAGTGAGAGACTCCAGGACTTTG  
 ACAAAGCAAGCATGTCATCTATGCTCCAAGCAGCCACAAGTATGCAGGGGAGTCATTCCCAGGAAT  
 TTATGATGCTCTGTTGATTTGAAAGCAAAGTGGACCTTCCAAGGCCTGGGGAGAAGTGAAGAGACAG  
 ATTTATGTTGCAGCCTTCACAGTGCAGGCAGCTGCAGAGACTTTGAGTGAAGTAGCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG206548 representing NM\_001014986  
 Red=Cloning site Green=Tags(s)

MWLLHETDSAVATARRPRWLCAGALVLAGFFLLGFLFGWFIKSSNEATNITPKHNMKAFLDELKAENI  
 KKFLYNFTQIPHLAGTEQNFQLAKIQSQWKEFGLDSVELAHYDVLLSYPNKTHPNYISIIINEDGNEIFN  
 TSLFEPPIPPGYENVSDIVPPFSAFSPQGMPEGDLVYVNYARTEDDFKLERDMKINCSGKIVIARYGKVF  
 GNKVKNALAGAKGVILYSDPADYFAPGVKSYPDGWNLPGGGVQQRGNILNLNGAGDPLTPGYPANEYAYR  
 RGIAEAVGLPSIPVHPIGYYDAQKLEKMGGSAPPDSSWRGSLKVPYNVGPGFTGNFSTQKVKMHIHSTN  
 EVTRIYNVIGTLRGAVEPDRYVILGGHRDSWVFGGIDPQSGAAVVHEIVRSFGTLKKEGWRPRRILFAS  
 WDAEEFLLGSTEWAEENSRLQLQERGVAYINADSSIEGNYTLRVDCTPLMYSLVHNLTKELKSPDEGFEG  
 KSLYESWTKKSPSPEFSGMPRIKLGSGNDFEVFFQRLGIASGRARYTKNWETNKFSGYPLYHSVYETYE  
 LVEKFYDPMFKYHLTVAQVRGGMVFEANISIVLPFDCRDYAVVLRKYADKIYSISMKHPQEMKTVSVSFD  
 SLFSAVKNFTEIASKFSERLQDFDKSKHVIYAPSSHNKYAGESFPGIYDALFDIESKVDPSKAWGEVKRQ  
 IYVAAFTVQAAAETLSEVA

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



ACCN: NM\_001014986

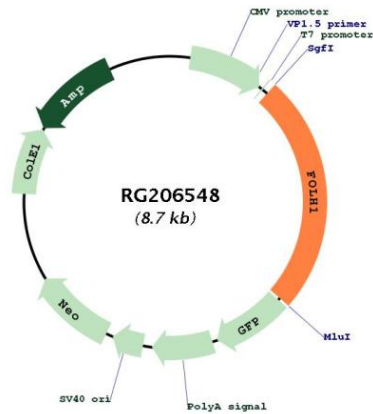
ORF Size: 2157 bp

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<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_001014986.3</a>
<b>RefSeq Size:</b>	2560 bp
<b>RefSeq ORF:</b>	2160 bp
<b>Locus ID:</b>	2346
<b>UniProt ID:</b>	<a href="#">Q04609</a>
<b>Cytogenetics:</b>	11p11.12
<b>Protein Families:</b>	Druggable Genome, Protease, Transmembrane

**Gene Summary:**

This gene encodes a type II transmembrane glycoprotein belonging to the M28 peptidase family. The protein acts as a glutamate carboxypeptidase on different alternative substrates, including the nutrient folate and the neuropeptide N-acetyl-L-aspartyl-L-glutamate and is expressed in a number of tissues such as prostate, central and peripheral nervous system and kidney. A mutation in this gene may be associated with impaired intestinal absorption of dietary folates, resulting in low blood folate levels and consequent hyperhomocysteinemia. Expression of this protein in the brain may be involved in a number of pathological conditions associated with glutamate excitotoxicity. In the prostate the protein is up-regulated in cancerous cells and is used as an effective diagnostic and prognostic indicator of prostate cancer. This gene likely arose from a duplication event of a nearby chromosomal region. Alternative splicing gives rise to multiple transcript variants encoding several different isoforms. [provided by RefSeq, Jul 2010]

**Product images:**



Circular map for RG206548