

Product datasheet for **RC218310**

PSMA (FOLH1) (NM_004476) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PSMA (FOLH1) (NM_004476) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PSMA
Synonyms:	FGCP; FOLH; GCP2; GCPII; mGCP; NAALAD1; NAALAdase; PSM; PSMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC218310 representing NM_004476
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTGGAATCTCCTTACGAAACCGACTCGGCTGTGGCCACCGCGCCGCCCGCGCTGGCTGTGCGCTG
 GGGCGCTGGTGTGGCGGGTGGCTTCTTCTCCTCGGCTTCTCTTCGGGTGTTTATAAAATCCTCCAA
 TGAAGCTACTAACATTACTCCAAAGCATAATATGAAAGCATTCTTGGATGAATTGAAAGCTGAGAACATC
 AAGAAGTCTTATATAATTTTACACAGATACCACATTTAGCAGGAACAGAACAAAATTTTTCAGCTTGCAA
 AGCAAATTCATCCAGTGGAAGAATTTGGCCTGGATTCTGTTGAGCTAGCACATTATGATGTCCTGTT
 GTCCTACCCAAATAAGACTCATCCCACTACATCTCAATAATTAATGAAGATGGAATGAGATTTTCAAC
 ACATCATTATTTGAACCACCTCTCCAGGATATGAAAATGTTTCGGATATTGTACCACCTTTCAGTGCTT
 TCTCTCCTCAAGGAATGCCAGAGGGCGATCTAGTGTATGTTAACTATGCACGAACTGAAGACTTCTTTAA
 ATTGGAACGGGACATGAAAATCAATTGCTCTGGGAAAATTGTAATTGCCAGATATGGGAAAGTTTTCAGA
 GAAAATAAGGTTAAAAATGCCAGCTGGCAGGGGCCAAAAGGAGTCACTCTACTCCGACCTTGCTGACT
 ACTTTGCTCCTGGGGTGAAGTCCTATCCAGATGGTTGGAATCTTCTGGAGGTGGTGTCCAGCGTGGAAA
 TATCCTAAATCTGAATGGTGCAGGAGACCTCTCACACCAGGTTACCCAGCAAATGAATATGCTTATAGG
 CGTGGAATTGCAGAGGCTGTTGGTCTTCCAAGTATTCCTGTTTCAATGGATACTATGATGCACAGA
 AGCTCCTAGAAAAATGGGTGGCTCAGCACCACAGATAGCAGCTGGAGAGGAAGTCTCAAAGTGCCTTA
 CAATGTTGGACCTGGCTTACTGGAACTTTTCTACACAAAAGTCAAGATGCACATCCACTCTACCAAT
 GAAGTGACAAGAATTTACAATGTGATAGTACTCTCAGAGGAGCAGTGGAAACAGACAGATATGTCATT
 TGGGAGGTCACCGGACTCATGGGTGTTTGGTGGTATTGACCCTCAGAGTGGAGCAGCTGTTGTTTCATGA
 AATTGTGAGGAGCTTTGGAACACTGAAAAGGAAGGGTGGAGACCTAGAAGAACAATTTTGTTCGAAGC
 TGGGATGCAGAAGAATTTGGTCTTCTGGTCTACTGAGTGGGCAGAGGAGAATTCAGACTCCTTCAAG
 AGCGTGGCGTGGCTTATATTAATGCTGACTCATCTATAGAAGGAACTACACTCTGAGAGTTGATTGTAC
 ACCGCTGATGTACAGCTTGGTACACAACCTAACAAAAGAGCTGAAAAGCCCTGATGAAGGCTTTGAAGGC
 AAATCTCTTTATGAAAGTTGGACTAAAAAAGTCTTCCAGAGTTCAGTGGCATGCCAGGATAAGCA
 AATTGGGATCTGGAAATGATTTTGGAGTGTCTTCCAACGACTTGAATGCTTCAGGCAGAGCACGGTA
 TACTAAAAATTTGGAAACAAACAATTCAGCGGCTATCCACTGTATCACAGTGTCTATGAAACATATGAG
 TTGGTGGAAAAGTTTTATGATCCAATGTTTAAATATCACCTCACTGTGGCCAGGTCGAGGAGGGATGG
 TGTTTGAGCTAGCCAATCCATAGTGTCCCTTTTGGATTGTCGAGATTATGCTGTAGTTTTAAGAAAGTA
 TGCTGACAAAATCTACAGTATTTCTATGAAACATCCACAGGAAATGAAGACATACAGTGTATCATTGAT
 TCACTTTTTTCTGCAGTAAAGAATTTTACAGAAATGCTTCCAAGTTCAGTGAGAGACTCCAGGACTTTG
 ACAAAGCAACCAATAGTATTAAGAATGATGAATGATCAACTCATGTTTCTGGAAAGAGCATTTATTGA
 TCCATTAGGGTTACCAGACAGGCCTTTTATAGGCATGTCATCTATGCTCCAAGCAGCCACAACAAGTAT
 GCAGGGGAGTCATTCCCAGGAATTTATGATGCTCTGTTTGATATTGAAAGCAAAGTGACCCCTTCCAAGG
 CCTGGGAGAAAGTGAAGAGACAGATTTATGTTGCAGCCTTACAGTGCAGGCAGCTGCAGAGACTTTGAG
 TGAAGTAGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC218310 representing NM_004476
 Red=Cloning site Green=Tags(s)

```
MWLLHETDSAVATARRPRWLCAGALVLAGGFFLLGFLFGWFIKSSNEATNITPKHNMKAFLDELKAENI
KKFLYNFTQIPHLAGTEQNFQLAKQIQSQWKEFGLDSVELAHYDVLLSYPNKTHPNYISINEDGNEIFN
TSLFEPPPPGYENVSDIVPPFSAFSPQGMPEGDLVYVNYARTEDDFKLERDMKINCSGKIVIARYGKVF
GNKVKNAQLAGAKGIVLYSDPADYFAPGVKSYPDGWNLPGGGVQVQGNILNLNGAGDPLTPGYPANEYAYR
RGIAEAVGLPSIPVHPIGYYDAQKLEKMGGSAPPDSSWRGSLKVPYNVGPFTGNFSTQKVKMHISTN
EVTRIYNVIGTLRGAVEPDRYVILGGHRDWSVFGGIDPQSGAAVVHEIVRSFGTLKKEGWRPRRILFAS
WDAEEFGLLGSTEWAEENSRLQERGVAYINADSSIEGNYTLRVDTPLMYSLVHNLTKELKSPDEGFEG
KSLYESWTKKSPSPEFSGMPRISKLGGNDFEVFFQRLGIASGRARYTKNWETNKFSGYPLYHVSYVETE
LVEKFYDPMFKYHLTVAQVRGGMVFEANSIVLPFDCRDYAVVLRKYADKIYSISMKHPQEMKTVSVSF
SLFSAVKNFTEIASKFSERLQDFDKSNPVLMMNDQLMFLERAFIDPLGLPDRPFYRHYIYAPSSHNY
AGESFPGIYDALFDIESKVDPSKAWGEVQRQIYVAFTVQAAATLSEVA
```

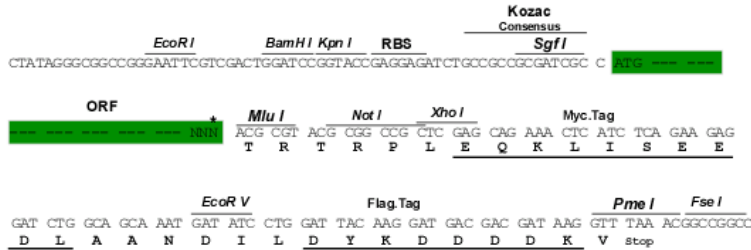
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6105_g05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_004476

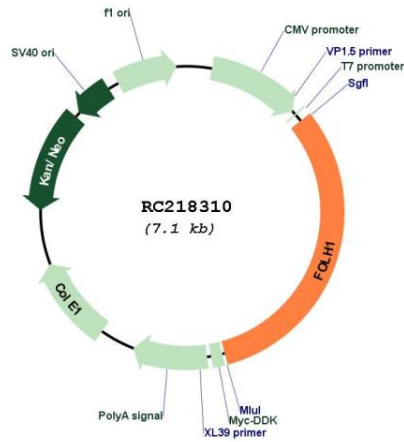
ORF Size: 2250 bp

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](#)

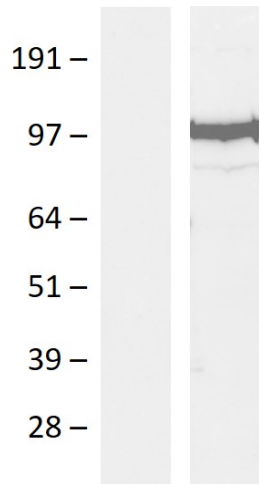
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none">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_004476.3
RefSeq Size:	2653 bp
RefSeq ORF:	2253 bp
Locus ID:	2346
UniProt ID:	Q04609
Cytogenetics:	11p11.12
Domains:	PA, TFR_dimer, Peptidase_M28
Protein Families:	Druggable Genome, Protease, Transmembrane
MW:	84.2 kDa
Gene Summary:	<p>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]</p>

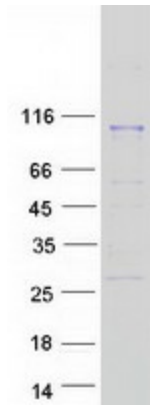
Product images:



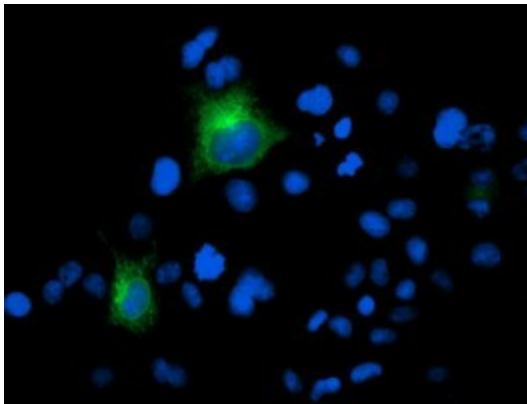
Circular map for RC218310



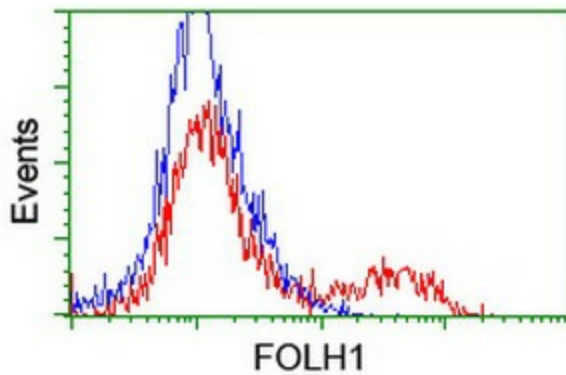
Western blot validation of overexpression lysate (Cat# [LY417950]) using anti-DDK antibody (Cat# [TA592569]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218310 using transfection reagent PEI.



Coomassie blue staining of purified FOLH1 protein (Cat# [TP318310]). The protein was produced from HEK293T cells transfected with FOLH1 cDNA clone (Cat# RC218310) using MegaTran 2.0 (Cat# [TT210002]).



Anti-FOLH1 mouse monoclonal antibody ([TA504752]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY FOLH1 (RC218310).



HEK293T cells transfected with either RC218310 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-FOLH1 antibody ([TA504752]), and then analyzed by flow cytometry.