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# PSMA

Catalog # PVGS1580

## Product Information

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| **Primary Accession** | Q04609 |
| **Species** | Human |
| **Sequence** | Lys44-Ala750 |
| **Purity** | > 90% as analyzed by SDS-PAGE |
| **Endotoxin Level** | |
| **Expression System** | CHO 3E7 |
| **Formulation** | Lyophilized from a 0.2 □m filtered solution in PBS. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in dd$H_2O$ or PBS up to 100 □g/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 2346 |
| **Other Names** | Glutamate carboxypeptidase 2, 3.4.17.21, Cell growth-inhibiting gene 27 protein, Folate hydrolase 1, Folylpoly-gamma-glutamate carboxypeptidase, FGCP, Glutamate carboxypeptidase II, GCPII, Membrane glutamate carboxypeptidase, mGCP, N-acetylated-alpha-linked acidic dipeptidase I, NAALADase I, Prostate-specific membrane antigen, PSM, PSMA, Pteroylpoly-gamma-glutamate carboxypeptidase, FOLH1 (HGNC:3788), FOLH, NAALAD1, PSM, PSMA |
| **Target Background** | Prostate-specific membrane antigen (PSMA) also known as Folate hydrolase 1 (FOLH1), Folylpoly-gamma-glutamate carboxypeptidase (FGCP), Glutamate carboxypeptidase 2 (GCP2), N-acetylated-alpha-linked acidic dipeptidase I (NAALAD1), is a type II membrane glycoprotein that is expressed in prostate tissue and to a lesser extent in the peripheral and central nervous system, small intestinal, and salivary gland tissues. PSMA has both folate hydrolase and N-acetylated-alpha-linked-acidic dipeptidase (NAALADase) activity and has a preference for tri-alpha-glutamate peptides. The catalytic activity of PSMA involves the release of unsubstituted C-terminal glutamyl residues, typically from Ac-Asp-Glu or folylpoly-gamma-glutamates. PSMA is used as a diagnostic and prognostic indicator of prostate cancer, and as a possible |

marker for various neurological disorders such as schizophrenia, Alzheimer's disease, and Huntington's disease.

## Protein Information

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| **Name** | FOLH1 ( HGNC:3788) |
| **Synonyms** | FOLH, NAALAD1, PSM, PSMA |
| **Function** | Has both folate hydrolase and N-acetylated-alpha-linked- acidic dipeptidase (NAALADase) activity. Has a preference for tri- alpha-glutamate peptides. In the intestine, required for the uptake of folate. In the brain, modulates excitatory neurotransmission through the hydrolysis of the neuropeptide, N-aceylaspartylglutamate (NAAG), thereby releasing glutamate. Involved in prostate tumor progression. |
| **Cellular Location** | Cell membrane; Single-pass type II membrane protein |
| **Tissue Location** | Highly expressed in prostate epithelium. Detected in urinary bladder, kidney, testis, ovary, fallopian tube, breast, adrenal gland, liver, esophagus, stomach, small intestine, colon and brain (at protein level). Detected in the small intestine, brain, kidney, liver, spleen, colon, trachea, spinal cord and the capillary endothelium of a variety of tumors. Expressed specifically in jejunum brush border membranes. In the brain, highly expressed in the ventral striatum and brain stem. Also expressed in fetal liver and kidney Isoform PSMA' is the most abundant form in normal prostate. Isoform PSMA-1 is the most abundant form in primary prostate tumors. Isoform PSMA-9 is specifically expressed in prostate cancer |