

## PSMA Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	mopsm;folate hydrolase (prostate-specific membrane antigen) 1;GCP2
Protein Construction:	A DNA sequence encoding the mouse FOLH1 (NP_058050.3) extracellular domain (Ile 44-Ala 752) was expressed, fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	O35409
Molecular Weight:	81.8 kDa (predicted); 100-110 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 88 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Glutamate carboxypeptidase 2, also known as Glutamate carboxypeptidase II, Membrane glutamate carboxypeptidase, Prostate-specific membrane antigen, GCPII, PSMA, FOLH1, and NAALAD1, is a single-pass type II membrane protein which belongs to the peptidase M28 family and M28B subfamily. FOLH1 is highly expressed in prostate epithelium. It is detected in urinary bladder, kidney, testis, ovary, fallopian tube, breast, adrenal gland,

liver, esophagus, stomach, small intestine, colon, brain (at protein level), and the capillary endothelium of a variety of tumors. FOLH1 has both folate hydrolase and N-acetylated alpha linked acidic dipeptidase (NAALADase) activity. It has a preference for tri-alpha-glutamate peptides. Genetic variation in FOLH1 may be associated with low folate levels and consequent hyperhomocysteinemia. This condition can result in increased risk of cardiovascular disease, neural tube defects, and cognitive deficits. FOLH1 also shows a promising role in directed imaging and therapy of recurrent or metastatic disease. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### Reference

Israeli R.S., et al.,(1993), Molecular cloning of a complementary DNA encoding a prostate-specific membrane antigen. *Cancer Res.* 53:227-230.

Su S.L., et al., (1995), Alternatively spliced variants of prostate-specific membrane antigen RNA: ratio of expression as a potential measurement of progression. *Cancer Res.* 55:1441-1443.

O'Keefe D.S., et al.,(1998), Mapping, genomic organization and promoter analysis of the human prostate-specific membrane antigen gene. *Biochim. Biophys. Acta* 1443:113-127.

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