Human PSMA / FOLH1 Protein (ECD,His Tag)

Catalog Number: 15877-H07H

General Information

Gene Name Synonym:

FGCP; FOLH; GCP2; GCPII; mGCP; NAALAD1; NAALAdase; PSM; PSMA

Protein Construction:

A DNA sequence encoding the human FOLH1 (NP_004467.1) (Lys44-Ala750) was expressed with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Bio Activity:

1.Measured by its ability to hydrolyze the substrate N-acetyl-L-Asp-L-Glu into N-acetyl-L-Asp and L-Glu. The L-Glu product is measured by fluorescence after its derivatization by ortho-phthaldialdehyde. The specific activity is >400 pmol/min/μg, as measured under the described conditions.
2.Loaded Monoclonal anti-human PSMA Antibody, human IgG4 on ProA Biosensor, can bind Recombinant Human PSMA/FOLH1 Protein, His Tag (Cat. No. 15877-H07H) with an affinity constant of 17.3 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
3.Immobilized anti-PSMA at 2 μg/mL (100 μL/well) can bind Recombinant Human PSMA / FOLH1 Protein (ECD,His Tag) (Cat: 15877-H07H), the EC50 is 50-160 ng/mL.

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -20℃ to -80℃

Predicted N terminal: His

Molecular Mass:
The recombinant human FOLH1 consists 726 amino acids and predicts a molecular mass of 81.86 kDa. As a result of glycosylation, it migrates as an approximately 98.67 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 0.9 mM $CaCl_2$, 0.5 mM $MgCl_2$-$6H_2O$, 2.7 mM KCl, 1.5 mM KH_2PO_4, 137.9 mM NaCl, 8.1 mM Na_2HPO_4-$7H_2O$, 0.5 mM $ZnCl_2$, pH 7.2.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

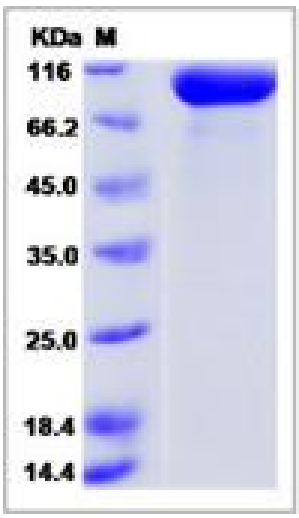
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



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Protein Description

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 thepeptidase 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.

References

1.Israeli R.S., *et al.*,(1993), Molecular cloning of a complementary DNA encoding a prostate-specific membrane antigen. Cancer Res. 53:227-230. 2.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. 3.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.