Rat PSMA / FOLH1 Protein, His Tag (active enzyme, MALS verified)

Catalog # PSA-R5245

Synonym

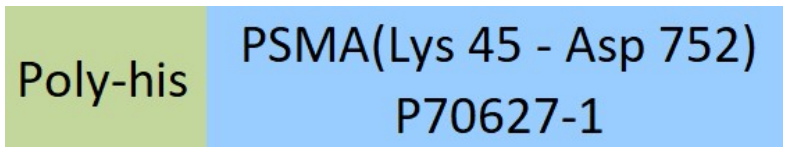
FOLH1, PSMA, GIG27, FOLH, NAALAD1, PSM, NAALADase I, GCPII, FGCP

Source

Rat PSMA, His Tag (PSA-R5245) is expressed from human 293 cells (HEK293). It contains AA Lys 45 - Asp 752 (Accession # P70627-1).

Predicted N-terminus: His

Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 81.4 kDa. The protein migrates as 95-110 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Supplied as 0.2 μm filtered solution in 25 mM MES, 500 mM NaCl, pH6.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

Please avoid repeated freeze-thaw cycles.

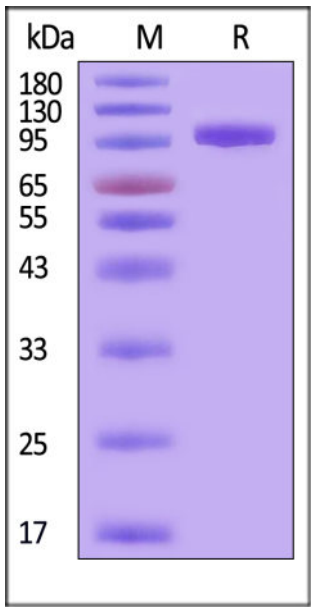
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

ACRO Quality Management System

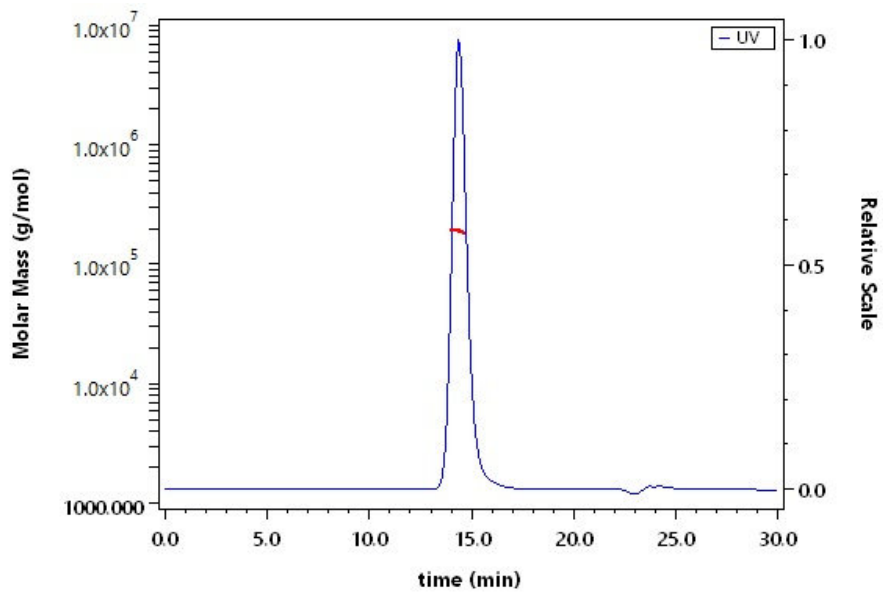
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



Rat PSMA, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



The purity of Rat PSMA, His Tag (Cat. No. PSA-R5245) is more than 90% and the molecular weight of this protein is around 170-208 kDa verified by SEC-MALS.

Bioactivity

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 >300 pmol/min/μg, as measured under the described conditions (QC tested).

Background

Prostate-specific membrane antigen (PSMA) is also known as Folate hydrolase 1 (FOLH1), Glutamate carboxypeptidase 2 (GCP2), N-acetylated-alpha-linked acidic dipeptidase I (NAALAD1), which belongs to the peptidase M28 family and M28B subfamily. FOLH1 / PSMA is stable at pH greater than 6.5. FOLH1 / PSMA is a type II transmembrane zinc metallopeptidase that is most highly expressed in the nervous system, prostate, kidney, and small intestine. FOLH1 / GCP-2 is homodimer and binds 2 zinc ions per subunit, and required for NAALADase activity. The catalytic activity of PSMA involved in releasing of an unsubstituted, C-terminal glutamyl residue, typically from Ac-Asp-Glu or folylpoly – gamma - glutamates. FOLH1 / GCP-2 / PSMA has both folate hydrolase and N – acetylated – alpha – linked - acidic dipeptidase (NAALADase) activity and has a preference for tri-alpha-glutamate peptides. GCP-2 / PSMA involved in prostate tumor progression and also exhibits a dipeptidyl-peptidase IV type activity. In vitro, cleaves Gly-Pro-AMC.