Human PSMA / FOLH1 Protein, Fc Tag, premium grade

Catalog # PSA-H5264

Synonym

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

Source

Human PSMA, Fc Tag, premium grade(PSA-H5264) is expressed from human 293 cells (HEK293). It contains AA Lys 44 - Ala 750 (Accession # Q04609-1).
Predicted N-terminus: Pro
It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

Fc(Pro 100 - Lys 330)	PSMA(Lys 44 - Ala 750)
P01857	Q04609-1

This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 106.0 kDa. The protein migrates as 110-140 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μg by the LAL method.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

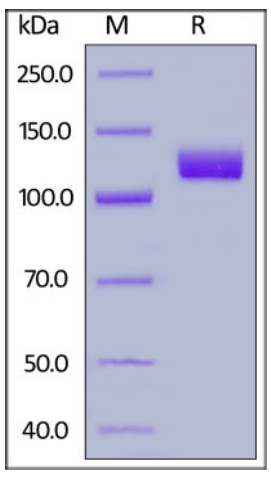
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

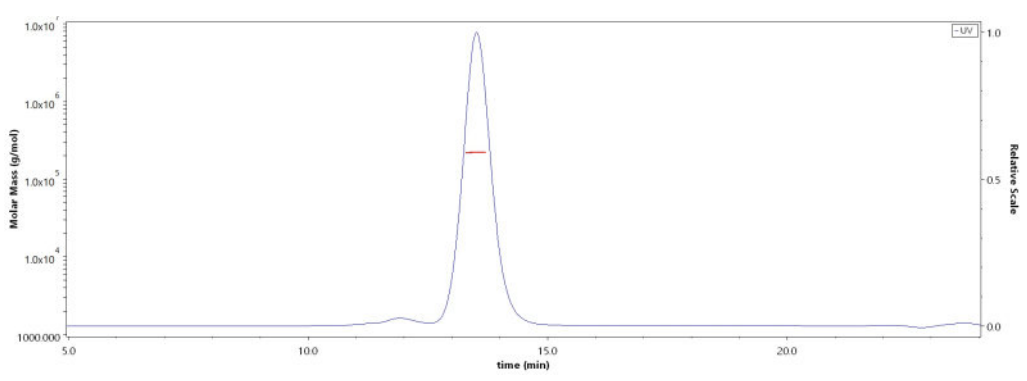
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human PSMA, Fc Tag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

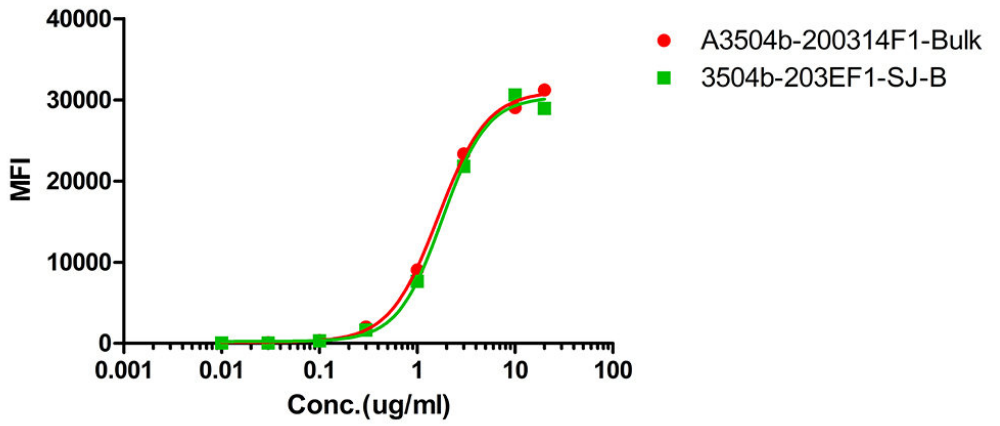


The purity of Human PSMA, Fc Tag, premium grade (Cat. No. PSA-H5264) is more than 85% and the molecular weight of this protein is around 210-260 kDa verified by SEC-MALS.
Report

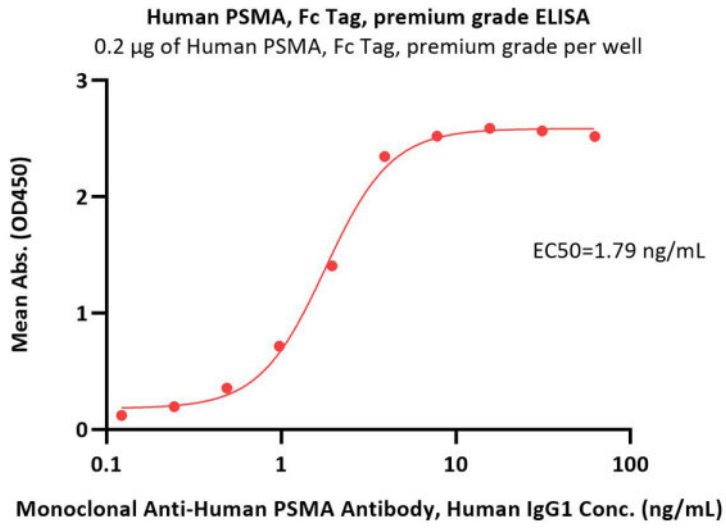
Bioactivity-FACS

PSMA FACS

2e5 of PSMA-CAR-293 cells transfected with anti-PSMA-scFv were stained with 100 μL of 1 μg/mL of Human PSMA, Fc Tag, premium grade (Cat. No. PSA-H5264) and negative control protein respectively, washed and then followed by PE anti-human IgG Fc antibody and analyzed with FACS (Routiney tested).



Bioactivity-ELISA



Immobilized Human PSMA, Fc Tag, premium grade (Cat. No. PSA-H5264) at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-Human PSMA Antibody, Human IgG1 with a linear range of 0.1-2 ng/mL (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.

Clinical and Translational Updates