Biotinylated Human PSMA / FOLH1 Protein, His,Avitag™, premium grade

Catalog # PSA-H82Qb

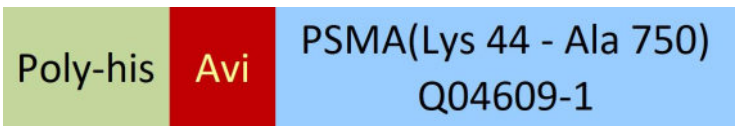
Synonym

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

Source

Biotinylated Human PSMA, His,Avitag, premium grade(PSA-H82Qb) is expressed from human 293 cells (HEK293). It contains AA Lys 44 - Ala 750 (Accession # Q04609-1).
Predicted N-terminus: His
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



This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 83.1 kDa. The protein migrates as 95-115 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 0.01 EU per μg by the LAL method.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

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

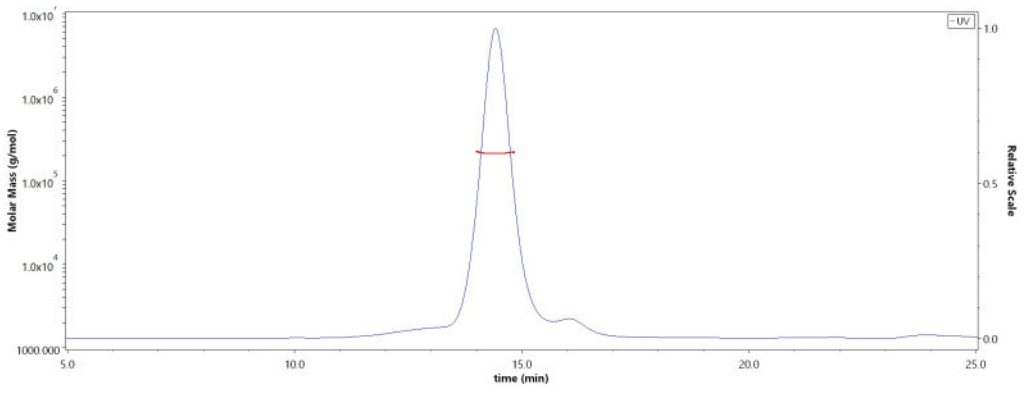
Please avoid repeated freeze-thaw cycles.

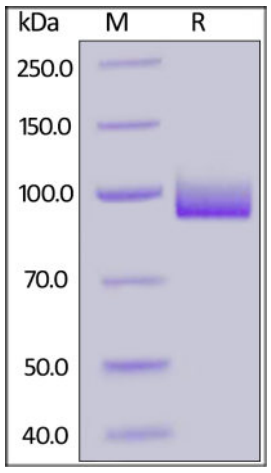
This product is stable after storage at:

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

SDS-PAGE

SEC-MALS

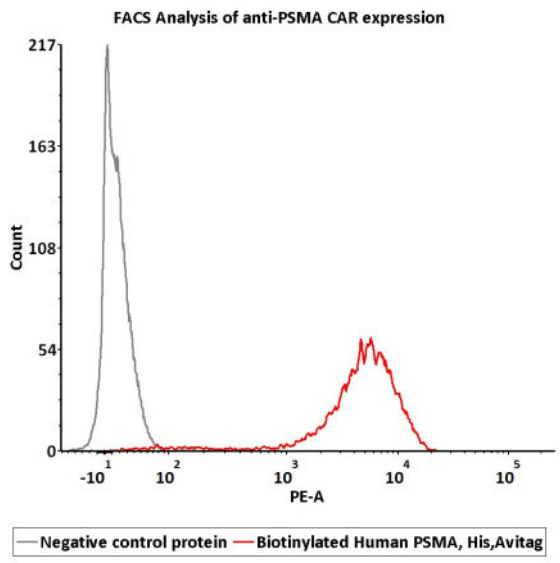




Biotinylated Human PSMA, His,Avitag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

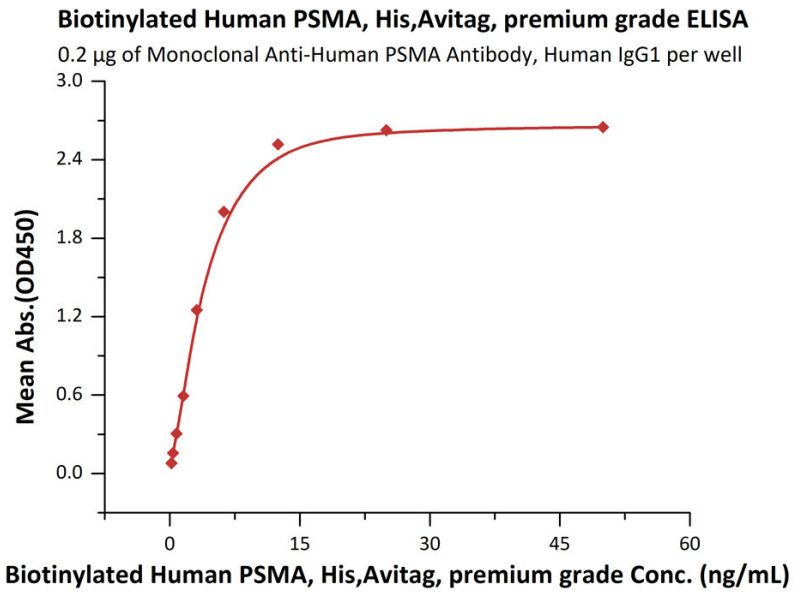
The purity of Biotinylated Human PSMA, His,Avitag, premium grade (Cat. No. PSA-H82Qb) is more than 85% and the molecular weight of this protein is around 190-225 kDa verified by SEC-MALS.
Report

Bioactivity-FACS



2e5 of PSMA-CAR-293 cells transfected with anti-PSMA-scFv were stained with 100 µL of 1 µg/mL of Biotinylated Human PSMA, His,Avitag, premium grade (Cat. No. PSA-H82Qb) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (Routiney tested).

Bioactivity-ELISA



Immobilized Monoclonal Anti-Human PSMA Antibody, Human IgG1 at 2 µg/mL (100 µL/well) can bind Biotinylated Human PSMA, His,Avitag,

premium grade (Cat. No. PSA-H82Qb) with a linear range of 0.2-6 ng/mL (QC tested).

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 >200 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.

Clinical and Translational Updates