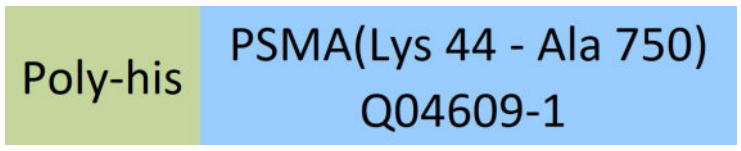
Synonym

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

Source

FITC-Labeled Human PSMA, His Tag (PSA-HF244) is expressed from human 293 cells (HEK293). It contains AA Lys 44 - Ala 750 (Accession # Q04609-1). It is the FITC labeled form of Human PSMA, His Tag (PSA-H52H3).
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 85-115 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate

FITC

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 535 nm

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular sieve treatment during purification process.

Protein Ratio

The FITC to protein molar ratio is ***1-3***.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 25 mM MES, 500 mM NaCl, pH6.5 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

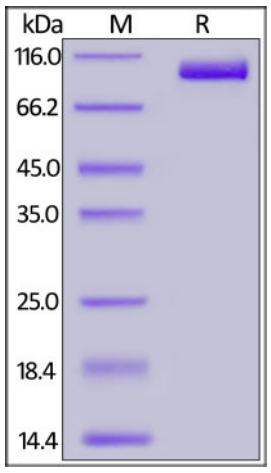
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

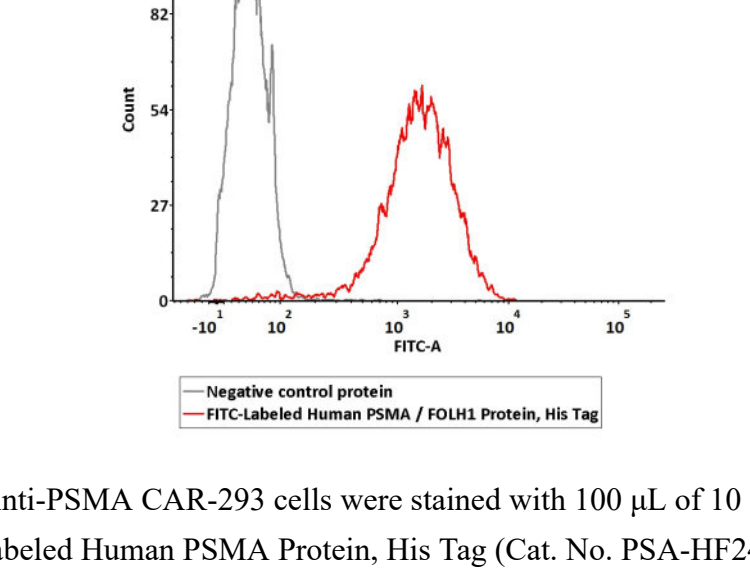
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



FITC-Labeled Human 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%.

Bioactivity-ELISA



Immobilized Monoclonal Anti-Human PSMA Antibody, Human IgG1 at 5 μg/mL (100 μL/well) can bind FITC-Labeled Human PSMA, His Tag (Cat. No. PSA-HF244) with a linear range of 0.005-0.16 μg/mL (QC tested).

Bioactivity-FACS

2e5 of Anti-PSMA CAR-293 cells were stained with 100 μL of 10 μg/mL of FITC-Labeled Human PSMA Protein, His Tag (Cat. No. PSA-HF244) and negative control protein respectively. FITC signal was used to evaluate the binding activity (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

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.