High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Detergent)

Catalog # ST1-H5287

Application

- Immunization
- Affinity testing (SPR / BLI)
- Screening (ELISA)

Synonyms

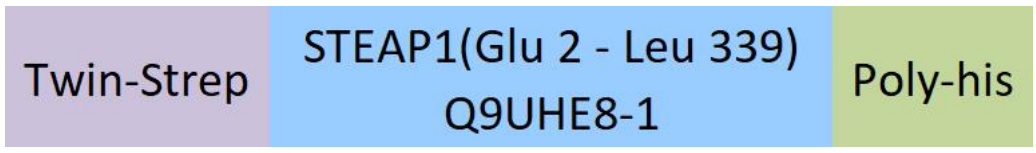
STEAP1, PRSS24, STEAP

Source

Detergent High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag (ST1-H5287) is expressed from human 293 cells (HEK293). It contains AA Glu 2 - Leu 339 (Accession # Q9UHE8-1).

Predicted N-terminus: Met

Molecular Characterization

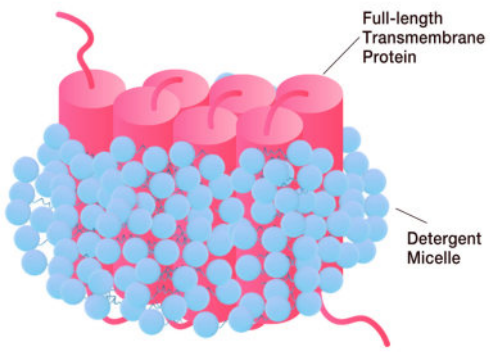


This protein carries a twin strep tag at the N-terminus and a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 44.7 kDa. The protein migrates as 40-41 kDa, 75 kDa and 110 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

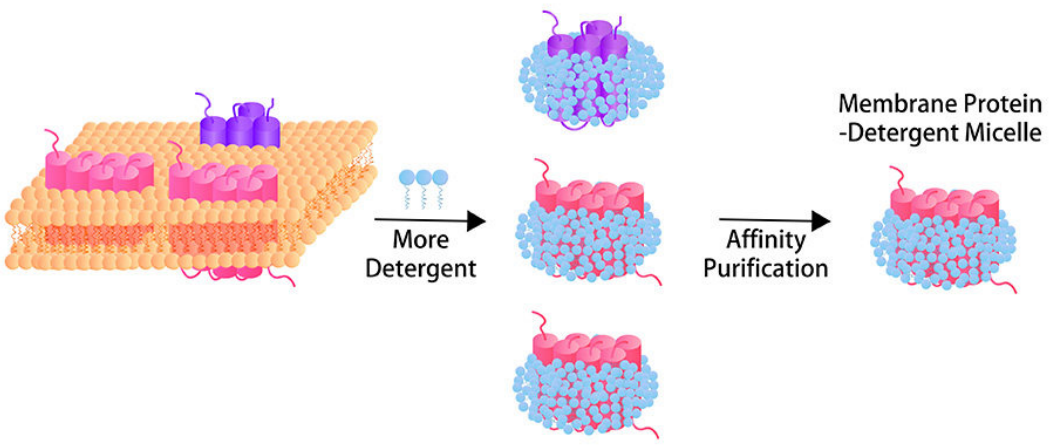
*The Buffer A (Cat. No. DN-12) is sold separately and not included in protein, you can follow the link for product information.

- **Structure**



Each full-length transmembrane protein is encapsulated by detergent micelle.

- **Synthesis Process**



Through **mild detergent micelle extraction**, dedicated solubilization, and stringent affinity purification, we maximally retain the native transmembrane conformation of full-length transmembrane proteins throughout downstream purification. This workflow yields purified, detergent-solubilized proteins free of unrelated membrane impurities and exogenous scaffold proteins, with **exceptional purity, accurate quantitation**, and well-preserved biological activity—ideal for immunization, binding assays in antibody discovery and screening (ELISA) and affinity testing (SPR and BLI), etc.

Purity

>80% as determined by SDS-PAGE.

Formulation

This product is not suitable for cell based experiments due to cytotoxicity of detergent.
Detergent buffer is INDISPENSABLE to keep membrane protein soluble and active, under no circumstances should you remove detergent.
Detergent buffer is sold separately and not included in protein, and please contact us if you need the buffer.

If glycerol is not compatible with your application, remove glycerol just before the immediate experiment, and NEVER store glycerol-free protein solution.

Supplied as 0.2 μm filtered solution in 50 mM HEPES, 150 mM NaCl, 0.08% Buffer A, pH7.5 with glycerol as protectant.

Contact us for customized product form or formulation.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

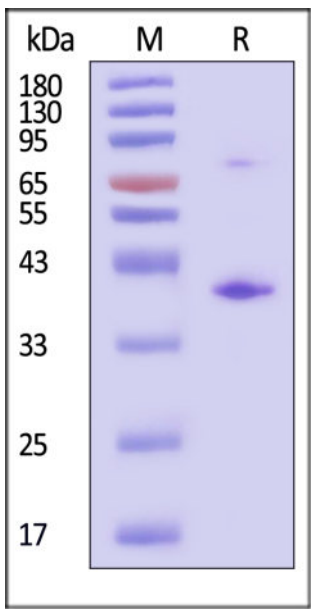
This product is stable after storage at:

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

ACRO Quality Management System

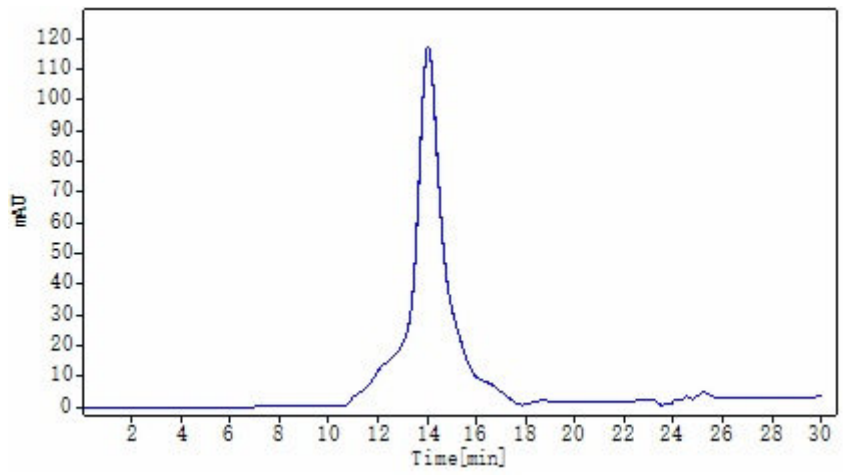
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



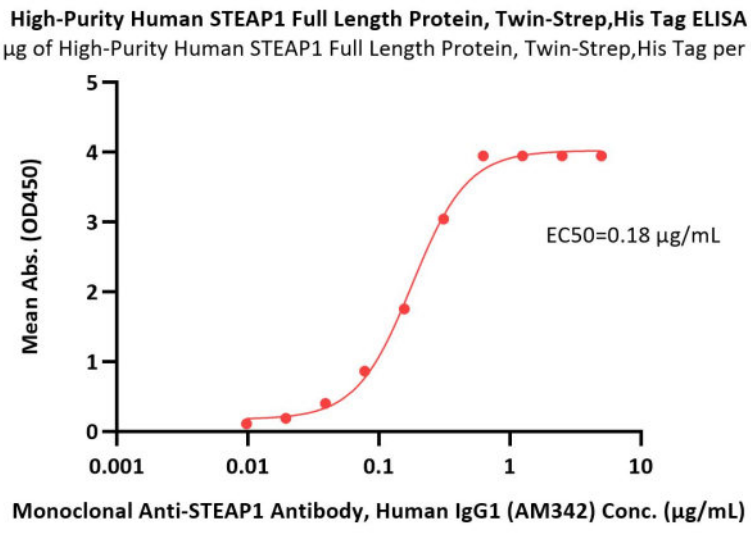
High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 80% (With Star Ribbon Pre-stained Protein Marker).

SEC-HPLC

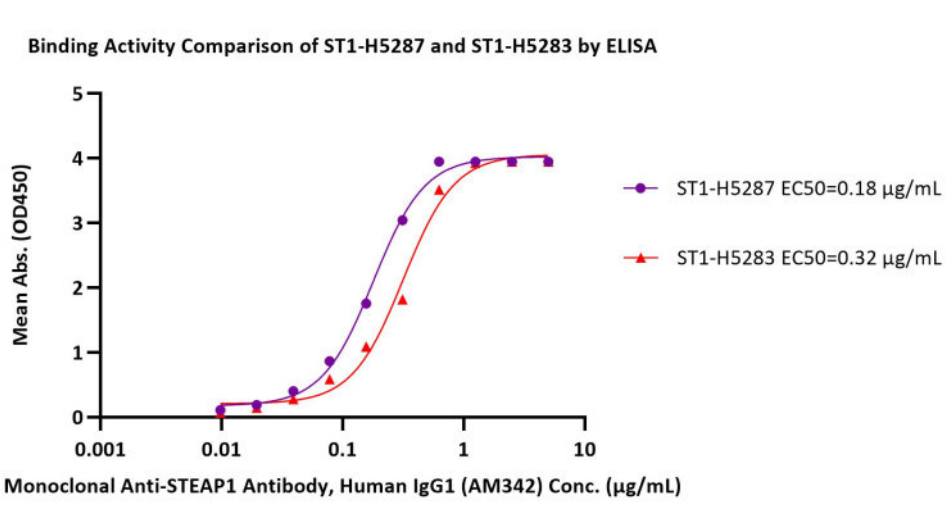


The purity of High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5287) was greater than 80% as determined by SEC-HPLC.

Bioactivity-ELISA

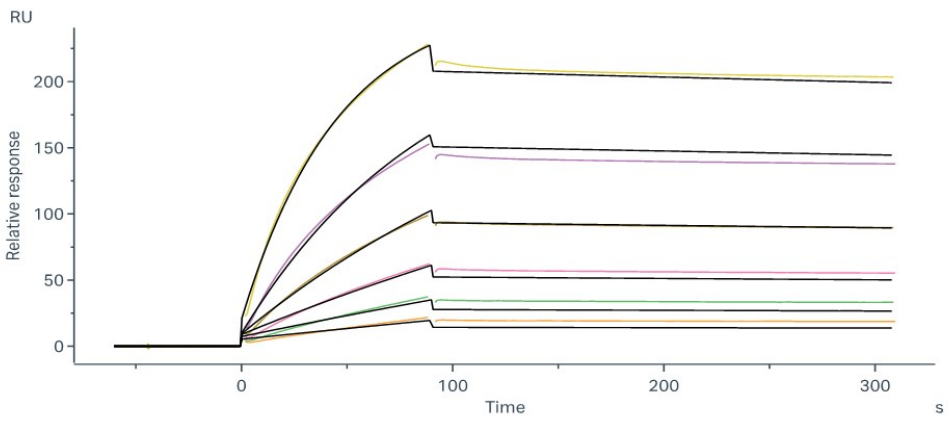


Immobilized High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5287) at 5 μg/mL (100 μL/well) on a Nickel Coated plate (Cat. No. SP-19) can bind Monoclonal Anti-STEAP1 Antibody, Human IgG1 (AM342) with a linear range of 0.01-0.625 μg/mL (QC tested).



Both ST1-H5287 and ST1-H5283 bind Monoclonal Anti-STEAP1 Antibody, Human IgG1 (AM342) in a dose-dependent manner, with ST1-H5287 displaying stronger binding activity, whereas both antibodies achieve comparable maximum binding at high concentrations (Routinely tested).

Bioactivity-SPR



Monoclonal Anti-STEAP1 Antibody, Human IgG1 (AM342) captured on Protein A Chip can bind High-Purity Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5287) with an affinity constant of 4.53 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

STEAP1 (Six-Transmembrane Epithelial Antigen of the Prostate 1) is a cell surface protein highly expressed in prostate, bladder, colon, and ovarian cancers, with limited normal tissue expression. Its role in tumor progression and metastasis makes it a promising target for antibody-drug conjugates, bispecific antibodies, and CAR-T therapies.