



## Synonym

STEAP1, PRSS24, STEAP

## Source

Human STEAP1 Full Length Protein, Twin-Strep,His Tag(ST1-H5283) is expressed from human 293 cells (HEK293). It contains AA Glu 2 - Leu 339 (Accession # [Q9UHE8-1](#)).

Predicted N-terminus: Met

## Molecular Characterization

Twin-Strep	STEAP1(Glu 2 - Leu 339) Q9UHE8-1	Poly-his
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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 40-42 kDa and 80 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  $\mu$ g by the LAL method / rFC method.

## Purity

>85% 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 circumstance 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 to your application, remove glycerol just before immediate experiment, and NEVER store glycerol-free protein solution.*

Supplied as 0.2  $\mu$ m filtered solution in 50 mM HEPES, 150 mM NaCl, Buffer A, pH7.5 with glycerol 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

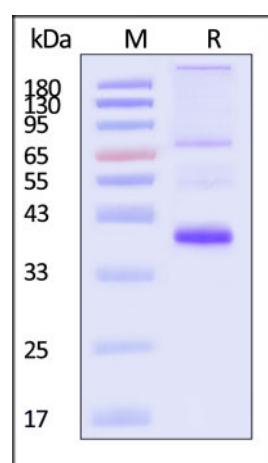
*Please avoid repeated freeze-thaw cycles.*

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.

\*The detergent Buffer A (Cat. No. [DN-12](#)) is sold separately and not included in protein. You can learn about the product information through [this link](#). We recommend [DN-12](#) for ELISA assay and [DC-11](#) for SPR/BLI assay.

## SDS-PAGE

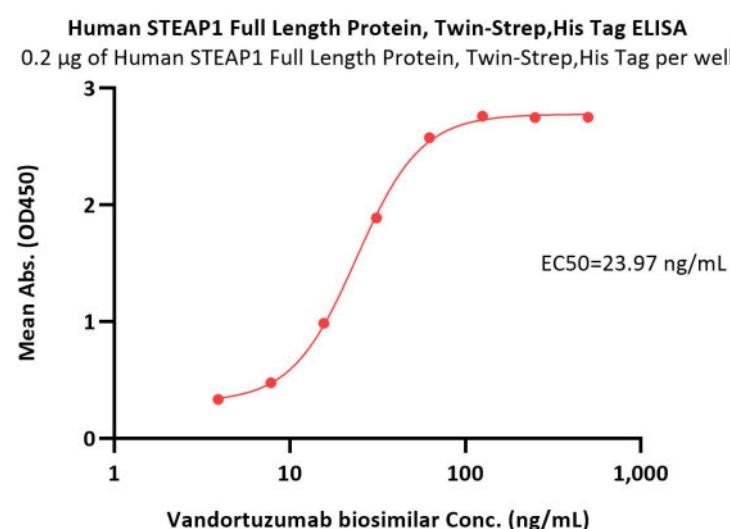


Human STEAP1 Full Length Protein, Twin-Strep,His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 85% (With [Star Ribbon Pre-stained Protein Marker](#)).

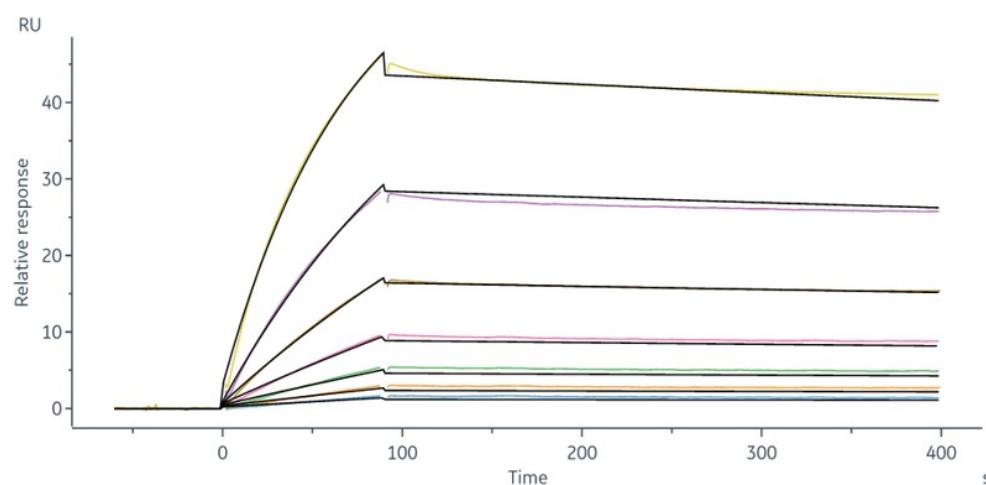
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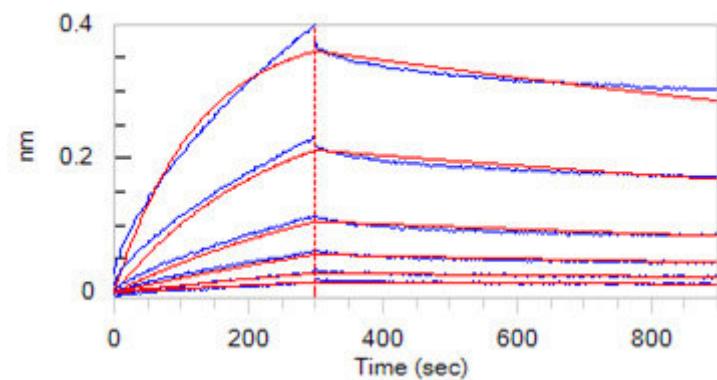
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**Bioactivity-ELISA**

Immobilized Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5283) at 2 µg/mL (100 µL/well) can bind Vandortuzumab biosimilar with a linear range of 4-63 ng/mL (QC tested).

**Bioactivity-SPR**

Anti-STEAP (Vandortuzumab) captured on Protein A Chip can bind Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5283) with an affinity constant of 2.30 nM as determined in a SPR assay (in presence of DDM and CHS) (Biacore 8K) (QC tested).

**Bioactivity-BLI**

Loaded Anti-STEAP1(Xaluritamig) on Protein A Biosensor, can bind Human STEAP1 Full Length Protein, Twin-Strep,His Tag (Cat. No. ST1-H5283) with

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an affinity constant of 9.86 nM as determined in BLI assay (in presence of DDM and CHS) (ForteBio Octet RED96e) (Routinely tested).

## Background

Six-transmembrane epithelial antigen of the prostate 1 (STEAP1) is an integral membrane protein that is highly up-regulated on the cell surface of several human cancers, making it a promising therapeutic target to manage these diseases. It shares sequence homology with three enzymes (STEAP2-STEAP4) that catalyze the NADPH-dependent reduction of iron(III). Taking into account its high specificity and overexpression in human cancers, STEAP1 is nowadays a promising candidate to be imposed as a therapeutic target.

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