# Biotinylated Human STEAP1 Full Length Protein, Avitag™,Flag&His Tag (Detergent)

Catalog # ST1-H82D3



# **Synonym**

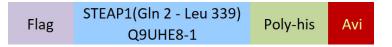
STEAP1, PRSS24, STEAP

### Source

Biotinylated Human STEAP1 Full Length Protein, Avitag,Flag&His Tag(ST1-H82D3) is expressed from human 293 cells (HEK293). It contains AA Gln 2 - Leu 339 (Accession # Q9UHE8-1).

Predicted N-terminus: Asp

# **Molecular Characterization**



This protein carries a Flag tag at the N-terminus, and a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag<sup>TM</sup>). The protein has a calculated MW of 44.7 kDa. The protein migrates as 40-43 kDa and 65-70 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Labeling

Biotinylation of this product is performed using Avitag<sup>TM</sup> 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 1.0 EU per µg by the LAL method.

# **Purity**

>90% 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 circumastance 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 µm filtered solution in 50 mM HEPES, 150 mM NaCl, 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.

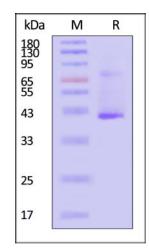
# **Storage**

Please protect from light and 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**



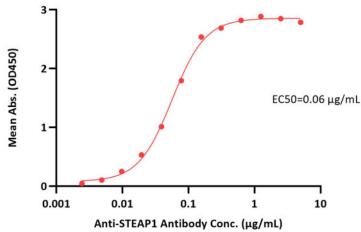
Biotinylated Human STEAP1 Full Length Protein, Avitag,Flag&His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With <u>Star Ribbon Prestained Protein Marker</u>).

# **Bioactivity-ELISA**



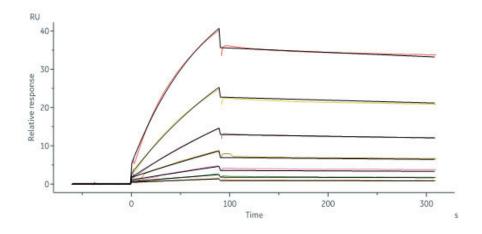


Biotinylated Human STEAP1 Full Length Protein, Avitag, Flag&His Tag ELISA 0.1  $\mu$ g of Biotinylated Human STEAP1 Full Length Protein, Avitag, Flag&His Tag per well



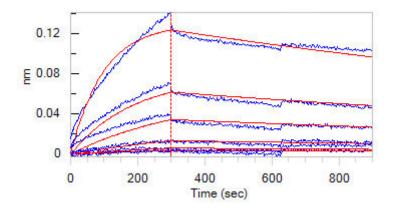
Immobilized Biotinylated Human STEAP1 Full Length Protein, Avitag,Flag&His Tag (Cat. No. ST1-H82D3) at 1  $\mu$ g/mL (100  $\mu$ L/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5  $\mu$ g/well) plate can bind Anti-STEAP1 Antibody with a linear range of 0.002-0.156  $\mu$ g/mL (QC tested).

# **Bioactivity-SPR**



Anti-STEAP1 Antibody captured on Protein A Chip can bind Biotinylated Human STEAP1 Full Length Protein, Avitag,Flag&His Tag (Cat. No. ST1-H82D3) with an affinity constant of 12.8 nM as determined in a SPR assay (in presence of DDM and CHS) (Biacore 8K) (Routinely tested).

# **Bioactivity-BLI**



Loaded Anti-STEAP1 Antibody on Protein A Biosensor, can bind Biotinylated Human STEAP1 Full Length Protein, Avitag,Flag&His Tag (Cat.



# Biotinylated Human STEAP1 Full Length Protein, Avitag™,Flag&His Tag (Detergent)

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No. ST1-H82D3) with an affinity constant of 8.26 nM as determined in BLI assay (ForteBio Octet R8) (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 DPH-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.

**Clinical and Translational Updates** 

