

Synonym

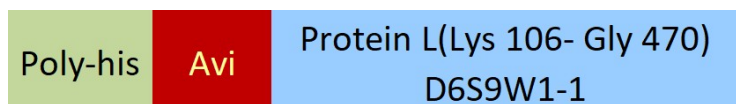
RPL,Protein L

Source

Biotinylated Recombinant Protein L, His,Avitag, also known as Recombinant Peptostreptococcus magnus Protein L, was expressed in E. coli at ACROBiosystems.

Predicted N-terminus: Met

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 43.7 kDa. The protein migrates as 50 kDa under reducing (R) condition (SDS-PAGE). This protein can bind to VL-Kappa.

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 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 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

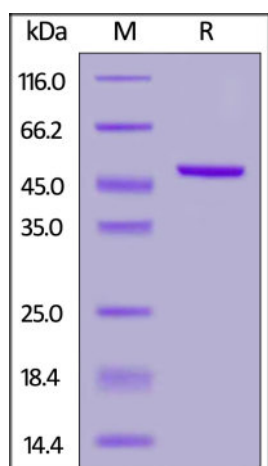
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please 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.

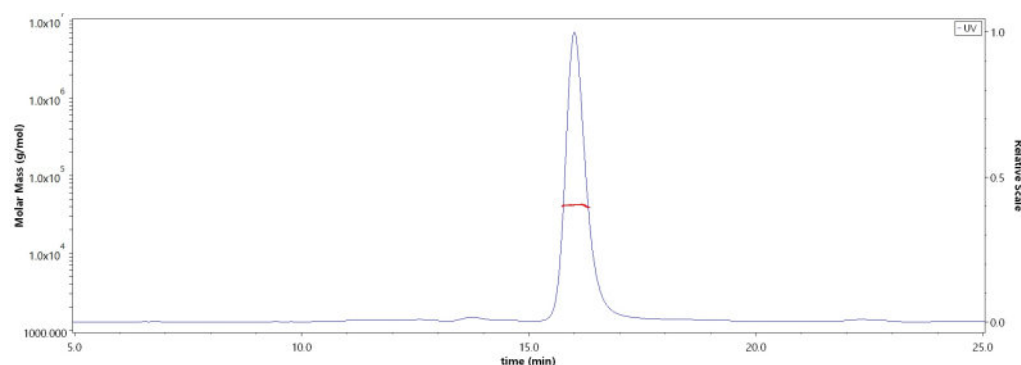
SDS-PAGE



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

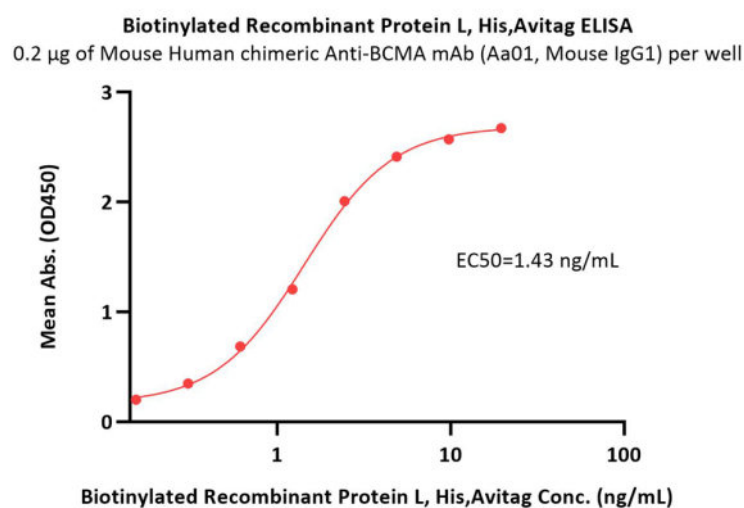
Bioactivity-ELISA

SEC-MALS

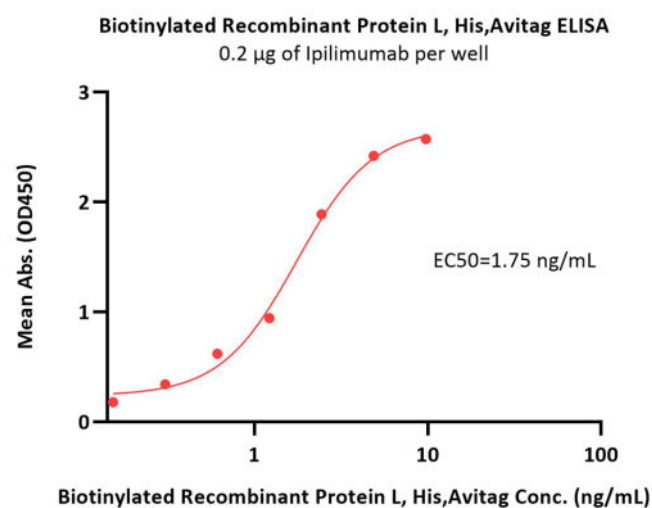


The purity of Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) is more than 90% and the molecular weight of this protein is around 40-56 kDa verified by SEC-MALS.

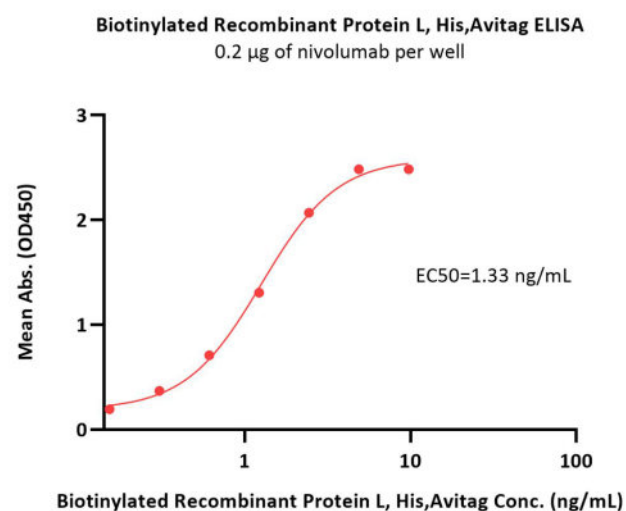
[Report](#)



Immobilized Mouse Human chimeric Anti-BCMA mAb (Aa01, Mouse IgG1) at 2 µg/mL (100 µL/well) can bind Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) with a linear range of 0.2-2 ng/mL (QC tested).

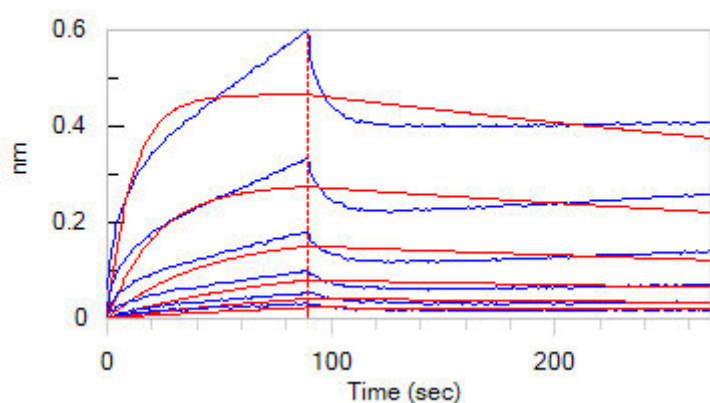


Immobilized Ipilimumab at 2 µg/mL (100 µL/well) can bind Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) with a linear range of 0.2-2 ng/mL (Routinely tested).

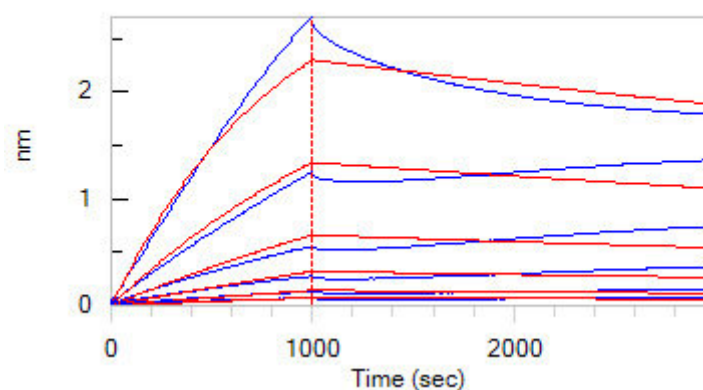


Immobilized nivolumab at 2 µg/mL (100 µL/well) can bind Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) with a linear range of 0.2-2 ng/mL (Routinely tested).

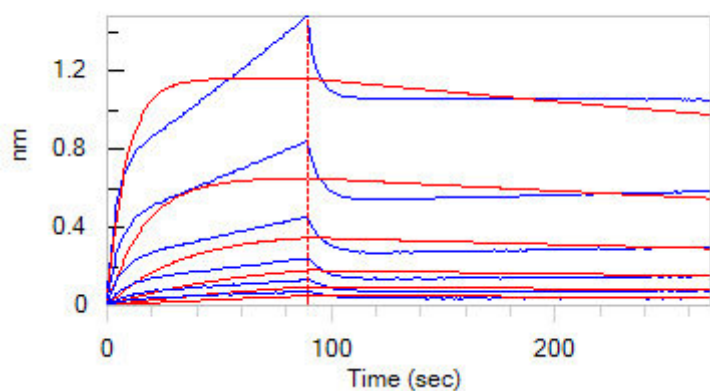
Bioactivity-BLI



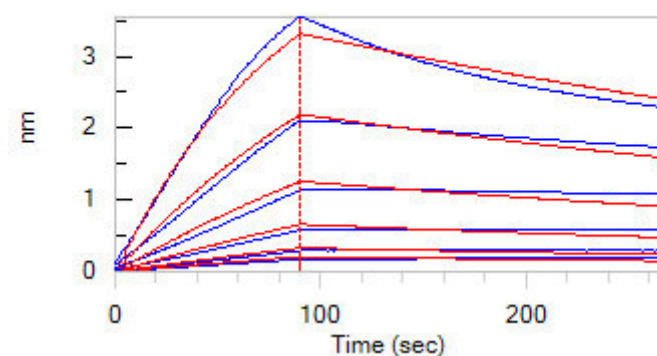
Loaded Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) on SA Biosensor, can bind Monoclonal Anti-Human CD19 Antibody, Mouse IgG2a with an affinity constant of 13.6 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) on SA Biosensor, can bind Anti-CD19 (FMC63), scFv, His Tag with an affinity constant of 74.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

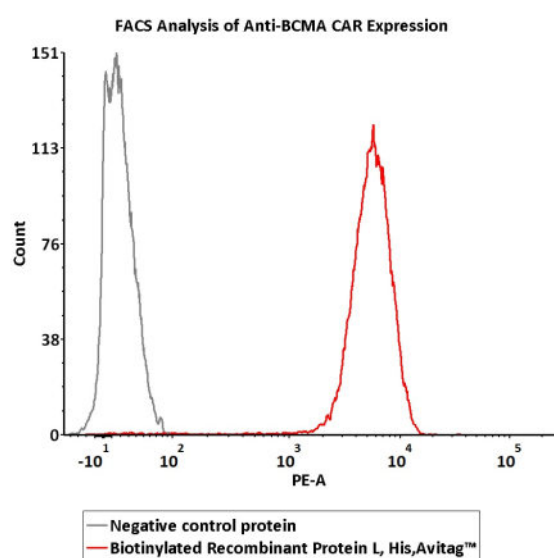


Loaded Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) on SA Biosensor, can bind Anti-BCMA scFv,His Tag with an affinity constant of 6.56 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

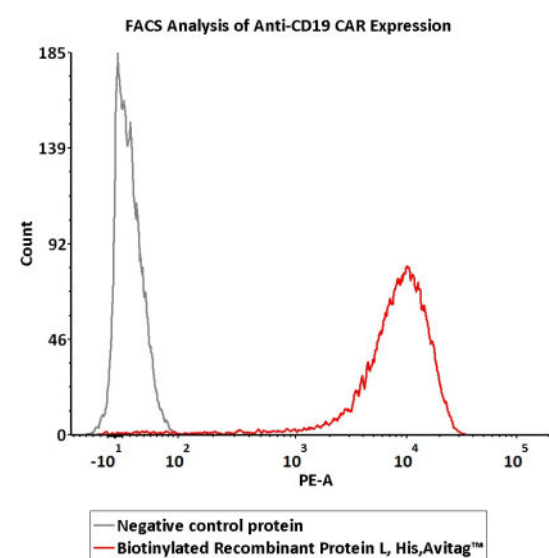


Loaded Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) on SA Biosensor, can bind Anti-Human BCMA MAb (human IgG1) with an affinity constant of 14 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS



2e5 of anti-BCMA CAR-293 cells were stained with 100 µL of 10 µg/mL of Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (QC tested).



2e5 of anti-CD19 CAR-293 cells were stained with 100 µL of 10 µg/mL of Biotinylated Recombinant Protein L, His,Avitag (Cat. No. RPL-P81Q7) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (Routinely tested).

Background

Protein L was isolated from the surface of bacterial species *Peptostreptococcus magnus* and was found to bind Ig(IgG,IgM,IgA,IgE and IgD) through L chain interaction, from which the name was suggested. Despite this wide-ranging binding capability with respect to Ig classes, Protein L is not a universal immunoglobulin-binding protein. Binding of Protein L to immunoglobulins is restricted to those containing kappa light chains (i.e., k chain of the VL domain). In humans and mice, kappa (k) light chains predominate. The remaining immunoglobulins have lambda (l) light chains. The recombinant protein contains four immunoglobulin (Ig) binding domains (Bdomains) of the native protein. Besides antibody, protein L is also suitable for binding of a wide range of antibody fragments such as Fabs, single-chain variable fragments (scFv), and domain antibodies (Dabs).

Clinical and Translational Updates

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