Streptavidin Protein-Acridinium ester (MALS verified)

Catalog # STN-NA114

Synonym

Streptavidin,SA

Source

Streptavidin Protein-Acridinium ester (STN-NA114) is Acridinium ester chemically conjugated Streptavidin expressed from E. coli cells.

Molecular Characterization

Streptavidin carries no "tag". The protein has a calculated MW of 13.8 kDa. The protein migrates as 15-16 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).

The protein is designed as a tetramer.

Labeling

Acridinium ester, can react with the primary amino group of protein. Under alkaline conditions, NHS is replaced as the leaving group, and the protein forms a stable amide bond with Acridinium ester.

Protein Ratio

Passed as determined by binding MPCLIA.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH6.3 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

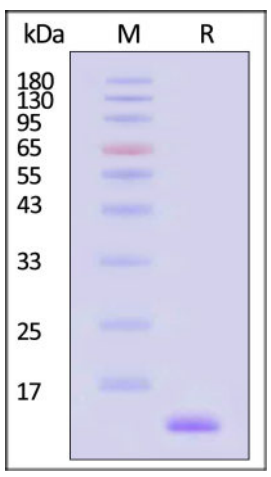
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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

This product is stable after storage at:

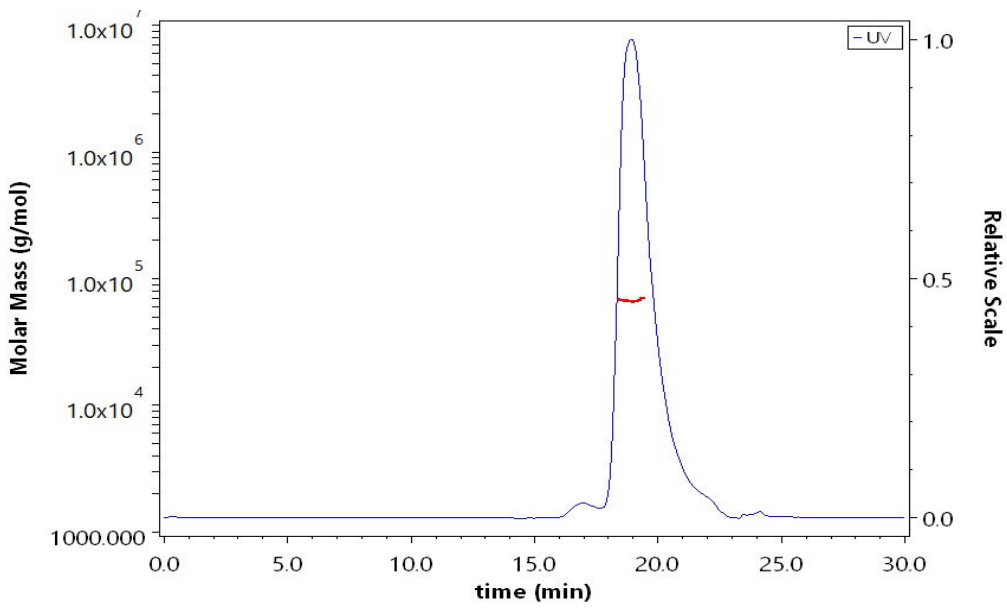
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



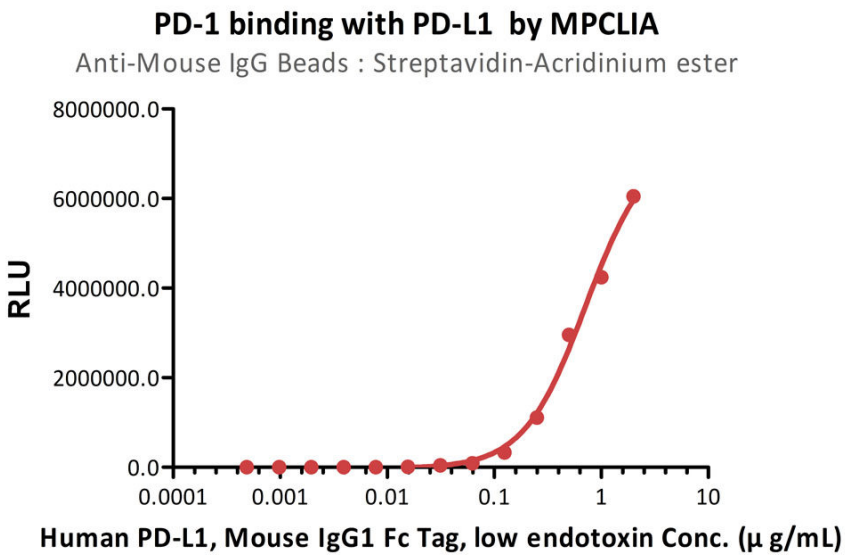
Streptavidin Protein-Acridinium ester on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

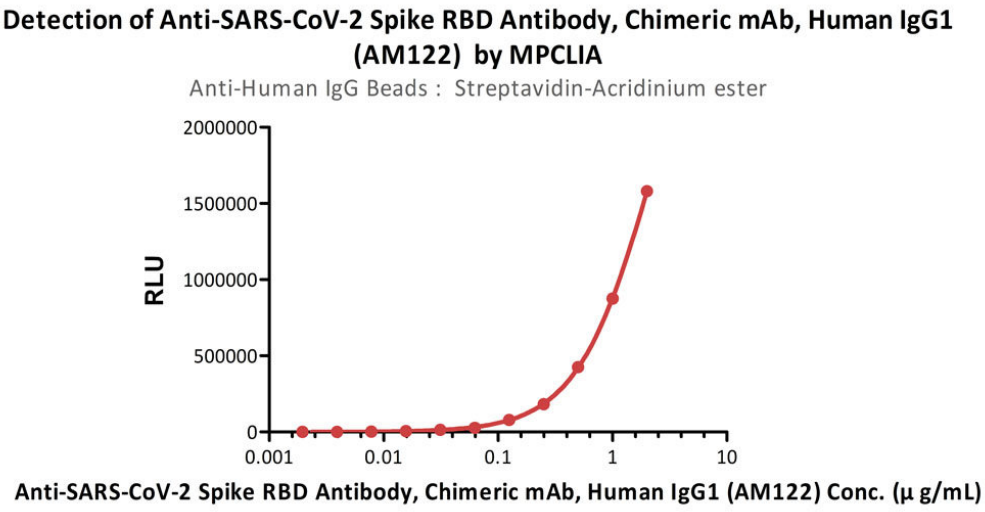


The purity of Streptavidin Protein-Acridinium ester (Cat. No. STN-NA114) is more than 90% and the molecular weight of this protein is around 55-75 kDa verified by SEC-MALS.
Report

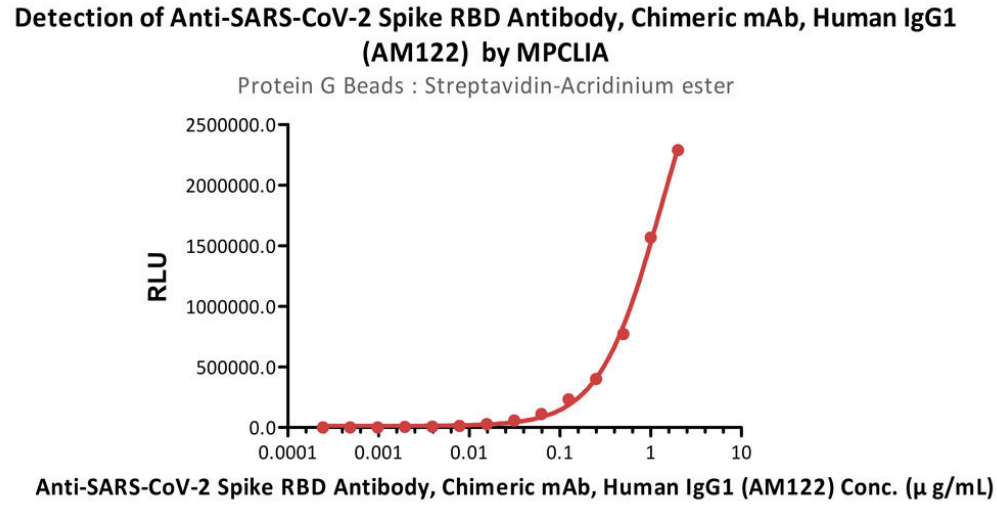
Bioactivity-MPCLIA



Immobilized 0.04 μg/Test of Biotinylated Human PD-1 Protein, Avitag,His Tag (Cat. No. PD1-H82E4) to the Streptavidin Protein-Acridinium ester (Cat. No. STN-NA114, 0.008 μg/Test), incubated with 20 μL/Test of Human PD-L1 Protein, Mouse IgG1 Fc Tag (Cat. No. PD1-H52A3) at increasing concentration coupled to Anti-Mouse IgG Magnetic Beads (10 μg beads/Test). Detection was performed with sensitivity of 7.8 ng/mL in Magnetism particulate chemiluminescence immunoassay (MPCLIA) (KEYSMILE, SMART 6500S) (QC tested).



Immobilized 0.04 μg/Test of Biotinylated SARS-CoV-2 Spike RBD, His,Avitag (Cat. No. SPD-C82E9) to the Streptavidin Protein-Acridinium ester (Cat. No. STN-NA114, 0.008 μg/Test), incubated with 20 μL/Test of Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (AM122) (Cat. No. S1N-M12A1) at increasing concentration coupled to Anti-Human IgG Magnetic Beads (10 μg beads/Test). Detection was performed with sensitivity of 7.8 ng/mL in Magnetism particulate chemiluminescence immunoassay (MPCLIA) (KEYSMILE, SMART 6500S) (Routinely tested).



Immobilized 0.04 μg/Test of Biotinylated SARS-CoV-2 Spike RBD, His,Avitag (Cat. No. SPD-C82E9) to the Streptavidin Protein-Acridinium ester (Cat. No. STN-NA114, 0.008 μg/Test), incubated with 20 μL/Test of Anti-SARS-CoV-2 Spike RBD Antibody, Chimeric mAb, Human IgG1 (AM122) (Cat. No. S1N-M12A1) at increasing concentration coupled to Protein G Magnetic Beads (10 μg beads/Test). Detection was performed with sensitivity of 0.244 ng/mL in Magnetism particulate chemiluminescence immunoassay (MPCLIA) (KEYSMILE, SMART 6500S) (Routinely tested).

Background

Streptavidin is a tetrameric protein purified from the bacterium Streptomyces avidinii, and exhibits high binding affinity for biotin. Able to bind one molecule of biotin with each subunit. Streptavidin (PI=6.0-7.5) has lower level of non-specific binding to various biological components at physiological pH than avidin (PI=7.4), resulting from its isoelectric point (PI).Streptavidin is useful in affinity chromatography, ELISA, immunohistochemistry and Western Blotting.