



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Streptavidin Protein
Catalog Number: rBP-1662
Manufacturer: LD Biopharma, Inc.

Introduction

Streptavidin is a tetrameric protein secreted by *Streptomyces avidinii*, which binds firmly to biotin. Streptavidin is widely used in molecular biology through its unique high affinity for the vitamin biotin. The dissociation constant (K_d) of the biotin-streptavidin complex is about $\sim 10^{-15}$ mol/L. The strong affinity recognition of biotin and biotinylated molecules has made streptavidin one of the most important components in diagnostics and laboratory kits. The streptavidin / biotin system has one of the biggest free energies of association of yet observed for non-covalent binding of a protein and small ligand in aqueous solution (K_{assoc} = 10^{14}). The complexes are also extremely stable over a wide range of temperature and pH.

Full-length Streptavidin cDNA was expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: Streptavidin
Accession Number: X03591.1
Species: *Streptomyces Avidinii*
Size: 500 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Argarana, CE et al., *Molecular cloning and nucleotide sequence of the streptavidin gene*. Nucleic Acids Res., 14: 1871-1882. (1986)



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

Applications

1. Can be used for assaying Biotin conjugated targets, such as protein, small molecular, and others in various detection technologies.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Activity: > 17^U / mg (one unit = streptavidin binds 1 µg D-biotin at pH 8.9).

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFDPKDSKAQVSAAEAGITGTWYNQLGSTFIVTAGA
DGALTGTYESAVGNAESRYVLTGRYDSAPATDGSGTALGWTVAWKNNYRNAHSATTWSGQYVGG
AEARINTQWLLTSGTTEANAWKSTLVGHDTFTKVKPSAASIDAACKAGVNNNGNPLDAVQQ