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# Certificate of Analysis and Data Sheet Recombinant Streptavidin, His Tag

**Catalog No.**  
228-11470

**Source**  
*Streptomyces avidinii*

### **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 (Kd) of the biotin-streptavidin complex is about ~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 noncovalent binding of a protein and small ligand in aqueous solution ( $K_{\text{assoc}} = 10^{14}$ ). The complexes are also extremely stable over a wide range of temperature and pH.

### **Description:**

Streptavidin *Streptomyces Avidinii* Recombinant fused to N-terminal His-Tag produced in E.Coli is a single, non-glycosylated polypeptide chain containing 167 amino acids and having a molecular mass of 17 kDa.

### **Physical Appearance:**

Sterile Filtered colorless solution.

### **Formulation:**

The Streptavidin protein solution contains 20mM Tris-HCl pH7.5.

### **Stability:**

Streptavidin although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### **Amino Acid Sequence:**

MVHHHHHHDP SKDSKAQVSA AEAGITGTWY NQLGSTFIIVT AGADGALTGT YESAVGNAES  
RYVLTGRYDS APATDGSGTA LGWTVAWKNN YRNAHSATTW SGQYVGGAEA RINTQWLLTS  
GTTEANAWKS TLVGHDTFTK VKPSAASIDA AKKAGVNNGN PLDAVQQ.

### **Purity:**

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**