
Product Data Sheet

Product Name: Streptavidin, His
 Cat. No.: GP24731
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Amino Acid Sequence	MVHHHHHDP SKDSKAQVSA AEAGITGTWY NQLGSTFIVT AGADGALTGT YESAVGNAES RYVLTGRYDS APATDGS GTA LGWTVAWKNN YRNAHSATTW SGQYVGGAEA RINTQWLLTS GTTEANAWKS TLVGHDTFTK VKPSAASIDA AKKAGVNNGN PLDAVQQ.		
Formulation	The Streptavidin protein solution (1mg/ml) contains 20mM Tris-HCl pH7.5.		

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 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.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

Recombinant *Streptomyces Avidinii* Streptavidin produced in E.Coli is a single, non-glycosylated polypeptide chain (25-183) containing a total of 167 amino acids and

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having a molecular mass of 17kDa. The Streptavidin protein is fused to an 8 aa N-terminal His-Tag and purified by proprietary chromatographic techniques.

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