

Streptavidin, His

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.

Catalog #: PRPS-628

Source: Escherichia Coli.

For research use only.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MVHHHHHDP SKDSKAQVSA AEAGITGTWY NQLGSTFIVT
AGADGALTGT YESAVGNAES RYVLTGRYDS APATDGS GTA LGWTVAWKNN YRNAHSATTW
SGQYVGGA EA RINTQWLLTS GTTEANAWKS TLVGHDFTFK VKPSAASIDA AKKAGVNNGN
PLDAVQQ.

Purity: Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

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

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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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.

References:

Title: Laterally mobile, functionalized self-assembled monolayers at the fluorinated-aqueous interface in a plug based microfluidic system: characterization and testing with membrane protein crystallization. Publication: Department of Chemistry, The University of Chicago, 929 East 57th Street, Chicago, Illinois 60637 E-mail: r-ismagilov@uchicago.edu Link: http://ismagilovlab.caltech.edu/publications/Ismagilov_JACS_2009_Mobile_Functional_SAMs_JEK_Supp_Info.pdf

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