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## Product Data Sheet

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Product Name: Streptavidin (37-159), His

Cat. No.: GP24732

Batch No.: 1

**Product Data**

Purity &gt;98%

Source E.coli.

Physical  
Appearance solidShipping  
Condition Shipped with Ice Packs.

Amino Acid  
Sequence  
 MGSSHHHHHH SGLVPRGSH MGSMAEAGI TGTWYNQLGS TFIVTAGADG  
 ALTGTYESAV GNAESRYVLT GRYDSAPATD GSGTALGWTW AWKNNYRNAH  
 SATTWSGQYV GGAEARINTQ WLLTSGTTEA NAWKSTLVGH DTFTKVKP.

Formulation  
 The Streptavidin solution (0.25mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl and 20% glycerol.

**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 ( $K_{assoc} = 10^{14}$ ). 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**

Streptavidin Recombinant produced in *E. coli* is a single polypeptide chain containing 148 amino acids (37-159) and having a molecular mass of 15.6kDa. Streptavidin is fused to a 25 amino acid His-tag at N-terminus & purified by proprietary chromatographic

**Caution: Product has not been fully validated for medical applications. For research use only.**

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