

## 32-4988: Streptavidin

### Description

Source : Bacterium *Streptomyces avidinii*. The Streptavidin preparation contains an N- and C-terminal shortened variant (core streptavidin) with improved properties concerning homogeneity, solubility, resistance towards proteolytic degradation and accessibility of the biotin binding pocket as compared to native streptavidin. Streptavidin has a molecular weight of 55kDa. 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  $\sim 10^{-15}$  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.

### Product Info

**Amount :** 10 mg

**Content :** Lyophilized (1mg/ml) in 50mM NaCl, pH 9.0.

**Storage condition :** Streptavidin although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. For longer storage in dissolved form add 1mM EDTA and/or 0.02 % Na<sub>3</sub>N or pass the solution through a sterile filter. Please prevent freeze-thaw cycles.

### Application Note

Gives a clear solution at 5mg/ml in 0.1M NaCl.

