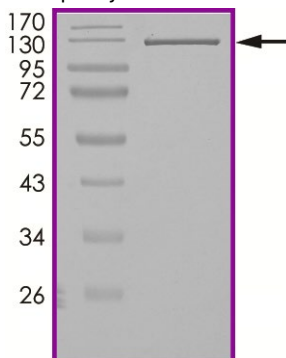


Product Name: Streptavidin

Catalog # ST01-E511U

Storage and Stability: Store at -70°C. To avoid repeated handling and multiple freeze/thaw cycles aliquot diluted product into smaller quantities.

Name	: Streptavidin
Alternate Names	: SA
Source	: <i>Streptomyces avidinii</i>
Accession Numbers	: Genbank: X03591
Host	: <i>E. coli</i>
Formulation	: Protein stored in 50 mM Na2HP04 pH7.5, 300 mM NaCl, 10% glycerol, and 1 mM DTT
Molecular weight	: Calculated: 20 kDa Observed: ~16.7 kDa
Purity	: The purity was determined to be >90% by densitometry
Gel Image	170



Streptavidin (SA) is a tetrameric protein originating from the bacterium *Streptomyces avidinii*. Each subunit of the streptavidin tetramer can associate with one biotin small vitamin molecule. Although the SA-biotin interaction is non-covalent, it has an extremely high affinity ($K_d \sim 10^{-14}$ M) (1). The SA-Biotin complex is highly thermostable and resistant to extreme pH, denaturing reagents, and enzyme degradation (2). By targeting biotin to biomolecules this interaction with SA can be exploited in a number of biochemical assays (3).

1. Weber PC, Cox MJ, Salemm FR, Ohlendorf DH. 1987. Crystallographic data for *Streptomyces avidinii* streptavidin. *J Biol Chem.* 262(26):12728-9.
2. González M, Argaraña CE, Fidelio GD. 1999. Extremely high thermal stability of streptavidin and avidin upon biotin binding. *Biomol Eng.* 16(1-4):67-72.
3. Dundas CM, Demonte D, Park S. 2013. Streptavidin-biotin technology: improvements and innovations in chemical and biological applications. *Appl Microbiol Biotechnol.* 97(21):9343-53.