

AF 594 streptavidin

<http://www.lumiprobe.com/p/streptavidin-af-594>

Streptavidin is a tetrameric biotin-binding protein derived from the bacterium *Streptomyces avidinii*. Streptavidin binds up to four biotin molecules with high affinity and selectivity via multiple hydrogen bonds and van der Waals interactions. Due to the lack of carbohydrate modifications and a near-neutral pI, streptavidin exhibits less nonspecific binding than another biotin-binding protein — avidin. Streptavidin also has high thermostability and resistance against extreme pH, denaturing agents, and enzymatic degradation, allowing using this protein under various experimental conditions.

Fluorescent conjugates of streptavidin are commonly used as a second-step reagent for specific detection of a variety of biotin-labeled biomolecules, such as proteins (antibodies, etc.), nucleic acids, lipids, and other molecules in indirect immunofluorescent staining, western blots, flow cytometry, microplate assays, and other detection techniques.

This streptavidin is a lyophilized conjugate with AF 594, a bright, photostable red fluorophore with spectral characteristics similar to Texas Red (absorption max. at 586 nm, emission max. at 613 nm).

The recommended concentration range for use is 0.5-10 µg/mL. Avoid using biotin-containing solutions (some serums, RPMI 1640, etc.) as diluents.

General properties

Appearance:	purple solid
Solubility:	good in water
Storage conditions:	Transportation: at room temperature for 1 week. Store at -20°C 9 months.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

Spectral properties

Excitation/absorption maximum, nm:	586
ϵ , L·mol ⁻¹ ·cm ⁻¹ :	105000
Emission maximum, nm:	613
Fluorescence quantum yield:	0.77
CF ₂₆₀ :	0.28
CF ₂₈₀ :	0.51