

Recombinant Streptavidin

Product Specification & Data Sheet

1. Introduction:

Recombinant Streptavidin is a tetrameric protein (4 x 13 kDa), which binds very tightly to the small molecule Biotin. The native Streptavidin comes from the bacterium *Streptomyces avidinii* and can bind 4 mol of biotin per mol of Streptavidin with a very high affinity ($K_d \sim 10^{-15}$). This turns the Streptavidin/Biotin system into a valuable tool for many biochemical applications.

Streptavidin coating of solid phases offers a universal immobilization principle for the detection and analysis of proteins, peptides, PCR-fragments, haptens etc with very low non-specific binding.

2. Specifications:

Product Number: 10110010

PAGE (Coomassie stained) /
densitometric analysis

Description:

The recombinant core Streptavidin is a tetrameric protein composed of 4 identical subunits.

Biotin Binding Capacity:

≥ 14,0 U/mg;

The Biotin binding capacity is measured by a HABA assay; Biotin-binding capacity is given in U/mg.

Definition U: 1U = binds 1µg Biotin at pH7.

Origin:

Recombinant sequence from *Streptomyces avidinii* expressed in *E. coli* bacterial cells

Quantity:

The product is supplied as lyophilized powder (with NaCl). The protein concentration is measured by spectral-photometry ($OD_{280\text{ nm}}$ - $OD_{402\text{ nm}}$). The extinction coefficient defines as follows: $A_{280\text{ nm}} [\text{ml/mg}, 1\text{ cm}, 280\text{ nm}] = 3.2..$

Molecular Mass:

~ 11 kDa (reduced conditions); ~ 55kDa (non-reduced conditions) by SDS-PAGE(Coomassie stained)

Purity:

>95%;

The purity of each batch prior to lyophilization is checked by SDS-

Reconstitution:

Streptavidin is supplied as a lyophilized powder with NaCl. For reconstitution dissolve the whole powder in PBS buffer at the desired concentration.

Usage Statement:

Laboratory reagent for research and *in vitro* use only.

Stability and Storage:

The Streptavidin is stable until the expiry date given on the label when stored at -20°C. The protein can be kept at 2-8°C for several weeks and on ice for several days. Repeated freezing and thawing should be avoided.

3. Applications:

The recombinant core streptavidin enables detection of biotinylated antibodies and other probes in a variety of standard assay methods, including western blotting, ELISA, immunohistochemistry, and fluorescence imaging. Streptavidin is a convenient coating agent to immobilize biotinylated molecules on solid phases (e.g. microtiter plates, chips, beads).

4. Additional Information:

Streptavidin concentration should be tested for optimal results in individual systems.

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