



Recombinant Streptavidin 3

Product Name: Recombinant Streptavidin 3, r-SA3

Catalog Number: NRPA34S

Packing Details: 1 mg, 10 mg, 100 mg, 500 mg

Formulation: Lyophilized from 5mM PB (4mM Na₂HPO₄, 1mM NaH₂PO₄, pH7.4)

Mol. Wt.: 16.7 kDa

Theory pI: 6.06

Purity: ≥95% (SDS-PAGE)

Concentration determination: 280nm absorption method, molar absorption coefficient is $4.19 \times 10^4(\text{mol/L})^{-1} \cdot \text{cm}^{-1}$, $c(\text{g/L}) = A_{280\text{nm}}/2.51$

Endotoxin: ≤5EU/mg

Resources: Escherichia coli (E. coli)

Storage Condition: -20 °C

Storage Duration: 3 years

Description:

Streptavidin (SA) has a high affinity with biotin. The affinity constant KD can reach 10-15m, and the active SA usually exists in the form of tetramer. Because SA does not contain glycosyl, it has a lower level of non-specific binding than avidin in detection and application. SA has been widely used in enzyme-linked immunosorbent assay, immunohistochemistry, time-resolved immunofluorescence Technology (TRFIA), quantitative PCR, single strand DNA preparation, biological fraction purification, monoclonal antibody preparation and other biotechnology fields.

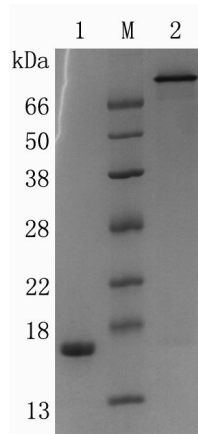
However, the super high affinity of SA and biotin is generally difficult to separate the combined SA and biotin by mild methods. The conditions that can be separated generally will make SA lose activity, and the antibody and antigen labeled by biotin will also lose activity, so it is generally considered that the combination of SA and biotin is irreversible. Recombinant streptavidin 3 (r-sa3), based on natural streptavidin, is modified at the molecular level to significantly reduce the affinity (KD ≈ 10-8m) with biotin, while maintaining the tetramer structure, which can realize the reversible combination and dissociation with biotin, and can be used for the mild separation, purification and recycling of biotinylated egg white, antibody, nucleic acid and other substances. R-sa3 contains cysteine in the molecule, which can realize directional coupling under certain conditions.

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M: Protein Molecular Weight Marker

Lane 1: r-SA3