Recombinant Stability-enhanced Core Streptavidin (r-se-cSA)

S767455

Storage temperature: -20℃.

Introduction

Source: E. coli fermentation engineering strai.

After taking the sample out of the low temperature condition, balance to room temperature, and wipe away the condensed water attached to the outside of the bottle, and carefully open the bottle cap to prevent the loss of dry powder splash. Redissolve with deionized water or buffer, after fully dissolved, dilute to a suitable concentration, and carefully move into the cuvea, using deionized water or buffer as a blank control, determine the absorbance value of the sample at 280 nm (it is recommended that the absorbance value be controlled within the range of 0.1-1.5), and substitute it into the following formula to calculate the protein concentration: Streptavidin (SA) is a homologous tetramer protein secreted by Streptomyces avidinii during its growth. As with avidin, one mole of streptavidin can bind four moles of biotin, and biotin has a high affinity. Because SA has no sugar group and its isoelectric point is close to neutral, SA has a lower non-specific binding water than avidin in detection applications. Compared with natural streptavidin, the enhanced stable core streptavidin removed the sequence unrelated to activity, only retained the core sequence related to activity, and modified the sequence, and the thermal stability, solubility, activity and other aspects were significantly improved compared with natural streptavidin. (pI: 5.68).

The product has been widely used in a variety of biotechnology fields, such as: Coated with microporous plates for immunoassay, preparation of SA coupled enzyme preparations, SA coupled fluorescein, SA coupled magnetic beads, etc., and then participate in enzyme-linked immunoadsorption and enzyme catalytic amplification experiments, immunohistochemistry, biomolecular purification, biosensors, biological nanospheres, pre-targeted pharmaceutical research and biochip materials.

Method of use (for reference only)

Due to the introduction of protective agents in the freeze-drying process of the product, in order to reduce your experimental error, it is recommended to first pass the internal detection method, and accurately quantify the protein in the product, and then conduct follow-up experiments, and adjust the product dosage according to the actual situation. It is recommended that UV absorption method be preferred for quantification, as follows:
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buffer, after fully dissolved, dilute to a suitable concentration, and carefully move into the cuvea, using deionized water or buffer as a blank control, determine the absorbance value of the sample at 280 nm (it is recommended that the absorbance value be controlled within the range of 0.1-1.5), and substitute it into the following formula to calculate the protein concentration:

$$C = \frac{N \times A_{280nm}}{E(0.1\%\ \text{at}\ 280nm)}$$

C: Protein mass concentration of the sample stock solution (mg/mL);

A_{280}nm: The absorption value of the protein solution measured at 280nm;

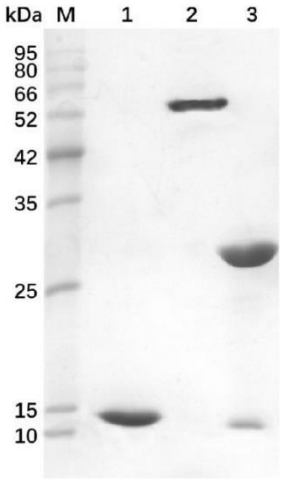
N: dilution ratio;

E(0.1% at 280nm): extinction coefficient of 1 mg/mL protein.

For example, after the freeze-dried powder of the product is fully dissolved and mixed, the appropriate amount of the stock solution is diluted 10 times, and the absorption value at 280 nm is 0.9411, then the protein concentration of the stock solution is 10×0.9411/3.137=3 mg/mL.

Note

1. Streptavidin freeze-dried powder is easily soluble in water, with a solubility of 10 mg/mL or higher;
2. It is recommended to use pure water to dissolve;
3. If there are undissolved substances, it is recommended to extend the re-dissolution time. The insoluble matter can also be removed by centrifugation or other means, and then used in subsequent experiments, and will not have a great impact on the total protein.
4. Considering the particularity of protein, freeze-dried powder is recommended to be used on the go. Repeated freeze-thawing should be avoided after dissolution. If it is needed for multiple uses, it is recommended to be frozen after packaging as required (-20°C); Avoid long-term storage at 4°C.



M: Protein molecular weight standard.

Lane 1: S767455 Monomer.

Lane 2: S767455 Tetramer.