

Streptavidin-APC

Introduction

Streptavidin is a 52,800 Da tetrameric protein that binds to Biotin with high specificity, and one molecule Streptavidin can bind to 4 Biotin molecules, and this binding is irreversible. Compared with avidin, the affinity of Streptavidin and Avidin, which is derived from egg white, is highly similar to that of Biotin, but Streptavidin is almost uncharged under neutral conditions, so the non-specific binding of Streptavidin is much lower than that of Avidin, and the non-specific background of the detection is much less. Streptavidin can be used for the detection of Biotin-labeled antibodies, nucleic acids, proteins, or other biotin-labeled molecules.

Allophycocyanin (APC) is a phycobiliprotein extracted from algae such as cyanobacteria and red algae. It is composed of two subunits, α and β . Each subunit contains one or more chromophore prosthetic groups with an open - chain tetrapyrrole structure, which are connected to the cysteine residues of the protein through thioether bonds. These chromophore prosthetic groups endow APC with unique optical properties. APC has a maximum absorption peak at around 651 nm and a maximum emission peak at around 660 nm, exhibiting bright fluorescence and can be used as a fluorescent marker. Due to its high fluorescence quantum yield, APC has high sensitivity in fluorescence detection, enabling it to generate strong fluorescence signals, which is beneficial for detection and analysis. Meanwhile, APC is relatively stable under appropriate buffer and storage conditions and can maintain its fluorescent properties for a certain period.

Streptavidin - APC is a product that combines Streptavidin protein and APC. It is suitable for the detection of biotin - labeled antibodies, nucleic acids, proteins, or other biotin - labeled molecules.

Protocol

1. Prepare the labeling working solution

For most applications of fluorescent streptavidin, it can be diluted at a ratio of 1/150 - 1/50. However, the optimal conditions should be determined for each specific application.

2. Please refer to the relevant protocol for operation.

Note

1. Storage solution: PBS containing 0.1% NaN_3 .
2. Storage conditions: Store at 4°C in the dark. Do not freeze. The product is valid for 6 months.

3. This product is for scientific research use only.



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