

Activated PE-Texas Red

Cat #: B-CHM320

Size: 10mg / 50mg

Storage: Store at 4°C protected from light.

Product specifications

Catalog No.	Name	Size	Ex/Em(nm)
B-CHM320	Activated PE-Texas Red	10 / 50mg	450-500 nm/600-615nm

Product Introduction

PE-Texas Red is a tandem fluorescent dye composed of PE and Texas Red. Antibodies labeled with PE-Texas Red are compatible with flow cytometers equipped with a 488nm argon laser. PE-Texas Red has a maximum emission wavelength of 615nm, which can be detected in the FL3 channel of a flow cytometer. Antibodies labeled with PE-Texas Red can be used in small flow cytometers with milliwatt-level lasers and large flow sorters equipped with full-power lasers.

Activated PE is easily conjugated to antibodies and other proteins without the need for chemical crosslinkers. These highly purified PE conjugates retain their spectral properties after conjugation. Our activated PE is treated with succinimidyl 4-(N-maleimidomethyl)cyclohexane-1-carboxylate (SMCC), which reacts with lysine residues. The maleimide group can react with free sulfhydryl groups of the conjugate partner protein. They are ready-to-use and can be directly conjugated without further pre-processing when mixed with sulfhydryl-containing targets.

Product Properties

Form: Solution

Shipping and Storage

Storage conditions: Store at 4°C protect from light, do not freeze.

Stability: Stable for at least 6 months under proper storage conditions.

Instructions for Use

1. Antibody Modification

- 1) Dissolve the antibody modification reagent (DTT/TCEP) in ddH₂O to prepare a 2 mg/ml antibody modification buffer.
- 2) Adjust the concentration of the antibody to be labeled (purity > 90%) to approximately 5-10 mg/ml using PBS buffer. Add 10 µl of the antibody modification buffer to per mg of antibody and gently mix. Stir the mixture at room temperature for 60-90 minutes.
- 3) After the reaction is complete, transfer the mixture to a centrifugal filter tube and add MES buffer. Centrifuge the filter multiple times to remove excess antibody modification buffer. The collected solution in the filter is the modified antibody, which should be adjusted to a concentration of 1-5 mg/ml.

2. Conjugation of Activated PE Tandem with Antibodies

- 1) Adjust the concentration of activated PE-Texas Red to 5 mg/ml using MES buffer. To obtain the accurate weight of activated PE-Texas Red, we recommend using the extinction coefficient of activated PE-Texas Red for measurement ($[PE-Texas\ Red] = 0.12245 \times A_{565}$, where $[PE-Texas\ Red]$ is the concentration in mg/ml and A_{565} is the absorbance at 565 nm, preferably within the range of 0.3-0.8).
- 2) Mix the modified antibody with activated PE-Texas Red at a mass ratio of 1:3 (3 mg of activated PE-Texas Red per mg of modified antibody). Perform the reaction at room temperature, protected from light, for 2 hours.
- 3) Dissolve NEM in anhydrous dimethyl sulfoxide (DMSO) to prepare a 12.5 mg/ml solution (0.1 M). Add 5 µl of NEM solution per mg of antibody to the reaction mixture from step 2) to block any remaining active groups.
- 4) Transfer the solution from step 3) to the centrifugal filter tube and remove the blocking buffer through repeated centrifugation.
- 5) Divide the labeled antibody into aliquots, add appropriate preservatives, and store at -20°C for future use.

Precautions:

1. Activated PE-Texas Red should be stored in the dark at cold. During the labeling process, it should be protected from light as much as possible.

2. The blocking reagent and modification reagent should be prepared fresh and used immediately. They should not be stored for a long time.
3. The labeled antibody should have high specificity and a purity of no less than 90%. Monoclonal antibodies are preferred, and the solution should not contain free amines. It is best to use PBS. Prior to labeling, the antibody should be depleted of NaN₃ and BSA. Operations such as dialysis, concentration, and concentration measurement can cause loss of antibody. Therefore, the appropriate amount of antibody for labeling should be determined based on specific circumstances.
4. Due to the susceptibility of the introduced groups in the modified antibody to reoxidation, the modified antibody should be conjugated with activated PE tandem as soon as possible after modification.

PE-Texas Red: