

## B-Phycoerythrin(B-PE)

Cat #: BGT-CHM-106

Size: 10mg/100mg/1g

### Product Introduction

Phycoerythrin is isolated and purified from red algae, which can emit strong fluorescence, it own good absorbance and high quantum yield, and has a wide excitation and emission range in the visible spectrum. Conventional labeling methods can easily combine it with biotin, avidin, and various monoclonal antibodies to produce fluorescent probes, which are used for antibody fluorescence labeling such as fluorescence microscopy detection, fluorescence immunoassay, dual or multi-color fluorescence analysis, cancer cell surface antigen detection, flow cytometry fluorescence measurement, as well as diagnostic and biotechnology applications such as in vivo imaging.

B-PE (B-Phycoerythrin) is a fluorescent protein belonging to the highly soluble fluorescent protein family in cyanobacteria and eukaryotic algae. B-PE is composed of alpha Composed of  $\alpha$ ,  $\beta$  and  $\gamma$  subunits, it exists in the form of  $(\alpha\beta)_6\gamma$ . The peak values of the absorption band are 545nm ( $\epsilon M=2.41 \times 10^6 M^{-1} cm^{-1}$ ) and 563 ( $\epsilon M=2.33 \times 10^6 M^{-1} cm^{-1}$ ), respectively. B-PE and its closely related R-PE are the most fluorescent phycobiliproteins. B-PE labeled streptavidin, primary and secondary antibodies have been widely used in fields such as flow cytometry and multi-color immunofluorescence staining.

### Product Properties

**Form:** Ammonium sulfate precipitation

**Molecular weight:** 240000 Dalton

**Spectral properties:** Ex : 545,563nm; Em: 575±5 nm

**Purity:** Amax/A280 >5.5, A620/Amax <0.01, A560/A496 <2.7

### Shipping and Storage

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

**Stability:** Stable for at least 12 months under proper storage conditions.

## Product Advantages

1. Can be Provided as Lyophilised powder, instant dissolution, free of ammonium sulfate that affects product activation, it is convenient to use;
2. With a wide absorption spectrum within a wide pH range makes it easier to choose an appropriate excitation wavelength, resulting in efficient fluorescence emission with specific fluorescence emission peaks during excitation;
3. Compared with other small molecule dyes (Cy, Alexa, FITC), the absorbance and fluorescence quantum yield are higher; The fluorescence is robust and stable, high sensitivity;
4. The fluorescence background is very low, difficult to quench, the fluorescence could last for a long time;
5. Multiple binding sites can be coupled with various biological and synthetic materials, with less non-specific adsorption; Easy to bind with small molecule dyes, antibodies, biotins, avidins, immune proteins, and other substances to produce fluorescent probes. Through conventional protein cross-linking technology, Phycoerythrin can be easily coupled to antibodies and other proteins without changing their spectral characteristics.
6. With uniform structure with a determined molecular weight, continuous cultivation of the source organism and high purity ensure consistent performance between batches, with very high water solubility. No toxic side effects, no radioactivity, very safe to operate and use.

