ProductInformation

MONOCLONAL ANTI-PHYCOERYTHRIN
Clone PE-85
Mouse Ascites Fluid

Product No. **P9669**
Lot No. 106H4806

Monoclonal Anti-Phycoerythrin (mouse IgG2b isotype) is dervied from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. R-phycoerythrin from *Porphyra tenera* was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The product is provided as ascites fluid within 0.1% sodium azide (see MSDS)* as a preservative.

Specificity
Monoclonal Anti-Phycoerythrin is immunospecific for phycoerythrin forms R and r from *Porphyra tenera* and forms B and b from *Porphyridium cruentum* by ELISA and immunoblotting procedures.

Working Dilution
A working dilution of 1:2,000 was determined by an ELISA using R-phycoerythrin at 2.5 µg/ml as the coat in microtiter plates.
In order to obtain optimum results, it is recommended that each individual user determine optimal working dilution by titration assay.

Description
The efficiency of photosynthesis in many species of algae and bacteria is enhanced significantly by the presence of a class of light harvesting proteins called phycobiliproteins that contain multiple bilin prosthetic groups. Phycobiliproteins such as phycoerythrins are well characterized, stable and intensely fluorescent soluble protein chromophores and are easily purified from red algae. They have a considerable potential as fluorescent probes as their molar absorbance coefficients are extremely high due to their multiple bilin chromophores that result in high quantum yields.

Phycoerythrin reagents offer advantages such as fluorescent efficiency which is 10 times higher than fluorescein, uniform fluorescence characteristics over a wide pH range, lack of quenching by other biologicals, reduced susceptibility to fading and photobleaching and a hydrophilic nature which minimize con-specific intereference. The broad excitation spectra of R-phycoerythrin (molecular weight 240,000) allows its simultaneous detection in the presence of FITC conjugates using a single excitation source. Thus phycoerythrin conjugates are ideal for application as covalent linked fluorescent tags in immunofluoescene techniques and especially in fluorescent activated cell sorting (FACS) for double immunostaining. Apart from their availability and increased sensitivity there are several obstacles that impair the widespread use of phycoerythrins. These include optimal conjugation and subsequent purification, appropriate stabilizers for the conjugates, surfactants and assay protocols that minimize effects of steric interference and non-specific binding. Most of these limitations could be addressed by the use of a specific monoclonal anti-phycoerythrin antibody as a bridge between the mouse monoclonal antibodies used in the various immunochemical techniques and the phycoerythrin label.

Storage
For continuous use, store at 2-8°C for up to one month. For extended storage, solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

*Due to sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.