abcam

ab34717

Rhodamine Anti-R Phycoerythrin/rpeA antibody

Anti-R Phycoerythrin/rpeA antibody conjugated to Rhodamine is a goat polyclonal antibody suitable for flow cytometry, IM, Western blot, and reacts with Red Algae samples.

Key facts

Isotype	IgG
Host species	Goat
Conjugation	Rhodamine
Excitation/Emission	Ex: 550nm, Em: 570nm
Storage buffer	Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1% BSA, 0.88% Sodium chloride, 0.424% Potassium phosphate solution
Form	Liquid
Clonality	Polyclonal
Purification technique	Affinity purification Immunogen
Specificity	This antibody recognizes R Phycoerythrin/rpeA conjugated IgG. It will also cross react with B Phycoerythrin.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	This antibody was purified from monospecific antiserun by immunoaffinity chromatography using a R Phycoerythrin/rpeA coupled to agarose beads followed by solid phase adsorption to remove any unwanted reactivities.

Reactivity data

Flow Cyt

Expected

Species	Red Algae
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Red Algae
Dilution info	Use at an assay dependent concentration.
Notes	-

IM

Expected

Species	Red Algae
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information R Phycoerythrin/rpeA

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

Label: Tetramethylrhodamine isothiocyanate (TRITC) (Molecular Weight 444 daltons). Absorption Wavelength: 550 nm. Emission Wavelength: 570 nm. Fluorochrome/Protein Ratio: 4.0 moles TRITC per mole of Goat IgG.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	R Phycoerythrin also known as rpeA is a light-harvesting protein found mainly in red algae and cyanobacteria. It plays a mechanical role in collecting light energy and assisting in photosynthesis. R Phycoerythrin features a mass of approximately 240 kDa and expresses primarily within the cells of these aquatic organisms. Its bright red color and fluorescence make it important in various biotechnological applications including bioimaging and flow cytometry.
Biological function summary	This chromoprotein functions as part of the phycobilisome complex serving as an accessory pigment that captures light and transfers energy to chlorophyll. This complex enhances the efficiency of photosynthesis by expanding the range of light wavelengths that organisms can use. The phycobilisome complex attaches to the thylakoid membranes aiding in the capture and channeling of light energy. Given these capabilities R Phycoerythrin proves to be an important component in maximizing photonic energy conversion within these photosynthetic organisms.
Pathways	R Phycoerythrin plays an important part in the photosynthetic light-harvesting pathway where it directly transmits energy to photosystem II. It engages with other proteins such as allophycocyanin and chlorophyll-binding proteins to optimize the capture of light. This efficient pathway enables organisms to perform photosynthesis even under low-light conditions ensuring survival in diverse aquatic environments.
Associated diseases and disorders	Abnormal expressions or malfunctions within this light-harvesting system do not frequently align directly with human diseases. However R Phycoerythrin's analogous pigments in other biological contexts may offer insights into photodamage and oxidative stress-related disorders. While the absence of direct association with specific human disorders limits its direct medical implications its study aids in understanding similar conditions linked to oxidative stress and metabolic processes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

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