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Polyclonal Antibody to GFP - TRITC

Alternate names: GFP-Tag, Green fluorescent protein

Catalog No.: R1091T

Quantity: 1 mg

Concentration: 1.0 mg/ml (by UV absorbance at 280 nm)

Background: Green fluorescence protein (GFP) is a 27 kDa protein derived from the jellyfish Aequorea victoria, which emits green light (emission peak at a wavelenth of 509 nm) when excited by blue light (excitation peak at a wavelenth of 395 nm). Green Fluorescent Protein (GFP) has become an invaluable tool in cell biology research, since its intrinsic fluorescence can be visualized in living cells. GFP fluorescence is stable under fixation conditions and suitable for a variety of applications. GFP has been widely used as a reporter for gene expression, enabling researchers to visualize and localize GFP-tagged proteins within living cells without the need for chemical staining. Other applications of GFP include assessment of protein protein interactions through the yeast two hybrid system and measurement of distance between proteins through fluorescence energy transfer (FRET) protocols. GFP technnology has considerably contributed to a greater understanding of cellular physiology.

YFP differs from GFP due to a mutation at T203Y; antibodies raised against full-length GFP should also detect YFP and other variants.

Uniprot ID: P42212

NCBI: 6100

Host: Goat

Immunogen: GST-Green Fluorescent Protein (GFP) fusion protein corresponding to the full length amino acid sequence (246 aa) derived from the jellyfish Aequorea victoria

Format:
State: Lyophilized Ig fraction
Purification: Immunoaffinity chromatography using Green Fluorescent Protein (Aequorea victoria) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities
Buffer System: 0.125 M Sodium Borate, 0.075 M Sodium Chloride, 0.005 M EDTA, pH 8.0 as a buffer, 10 mg/ml Bovine Serum Albumin (BSA) IgG and (protease free) as stabilizer, 0.01 % (w/v) Sodium azide as preservative
Label: TRITC – (Molecular weight 444 daltons)
Absorption / Emission: 550 nm / 570 nm
Molar Ratio: 2.9 moles TRITC per mole of Goat IgG
Reconstitution: Restore with 1.0 ml of deionized water (or equivalent).

Applications: ELISA (Sandwich or Capture; ELISA for direct binding recognizes wild type, recombinant and enhanced forms of GFP; for sandwich ELISA titrate GFP in solution using either form of

the antibody as the capture or detection antibodies, detection antibody is typically conjugated to to biotin and complexed with streptavidin-HRP).
Western blot (Peroxidase conjugated anti-GFP antibody shows a 42 kDa band).
Immunoflourescence.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody detects Fluorescent Protein (GFP).
Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, anti-Peroxidase and purified and partially purified Green Fluorescent Protein (Aequorea victoria) Serum. No reaction was observed against Human, Mouse and Rat Serum Proteins.

Storage:

Store vial at 2 - 8 °C prior to reconstitution.
Following reconstitution the product is stable for one month at 2 - 8 °C as an undiluted liquid. Dilute only prior to immediate use.
For extended storage add glycerol to 50 % and then aliquot contents and freeze at -20 °C or below. Avoid repeated freezing and thawing.
Centrifuge product if not completely clear after standing at room temperature.
Shelf life: One year from despatch.

Product Citation:

1. Yuko Suzuki, Hideo Mogami, Hayato Ihara, and Tetsumei Urano Unique secretory dynamics of tissue plasminogen activator and its modulation by plasminogen activator inhibitor-1 in vascular endothelial cells Blood, Jan 2009; 113: 470 - 478.