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R1461AP Monoclonal Antibody to GFP - AP

Alternate names: GFP-Tag, Green fluorescent protein

Quantity: 1 mg

Concentration: 1.0 mg/ml (by UV absorbance at 280 nm where ε0.1% = 0.71)

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 / Isotype: Mouse / IgG2a

Clone: 9F9.F9

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

Format:
State: Liquid (sterile filtered) purified Ig fraction prepared from tissue culture supernatant
Purification: Affinity Chromatography on Protein A
Buffer System: 0.05M Tris Chloride, 0.15M Sodium Chloride, 0.001M Magnesium Chloride, 0.0001M Zinc Chloride, 50% (v/v) Glycerol, pH 8.0
Preservatives: 0.01% (w/v) Sodium Azide
Stabilizers: 10 mg/ml BSA (IgG and Protease free)
Label: AP – Alkaline Phosphatase (Calf Intestine) (Molecular Weight 140,000 daltons)

Applications:
ELISA: 1/2,000-1/12,000.
Western Blot: 1/500-1/2,500.
Immunohistochemistry: 1/200-1/1,000.

Note: Monoclonal anti-GFP is designed to detect enhanced GFP and GFP containing recombinant proteins. This antibody can be used to detect GFP by ELISA (Sandwich or Capture) for the direct binding of antigen. Biotin conjugated monoclonal anti-GFP is well suited to titrate GFP in a Sandwich ELISA in combination with anti-GFP antibody

(Cat.-No R1091P) as the Capture antibody. Only use the monoclonal form for the detection of enhanced or recombinant GFP. Polyclonal anti-GFP detects all variants of GFP tested to date. The Biotin conjugated detection antibody is typically used with streptavidin conjugated HRP (Cat.-No R021HRP) or other streptavidin conjugates. The use of polyclonal anti-GFP results in significant amplification of signal when fluorochrome conjugated polyclonal anti-GFP is used relative to the fluorescence of GFP alone.
For Immunoblotting use either Alkaline Phosphatase or Peroxidase conjugated anti-GFP to detect GFP or GFP containing proteins on western blots.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Assay by Immunoelectrophoresis resulted in a single precipitin arc against anti-Mouse Serum. Reactivity is observed against recombinant Green Fluorescent Protein (recombinant GFP from Aequorea victoria) by both Western blot and ELISA. No reaction is seen against RFP.

Storage: Store the antibody undiluted at 2-8°C.
DO NOT FREEZE!
Shelf life: one year from despatch.