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R1091HRP Polyclonal Antibody to GFP (Ads. to Hu, Ms, Rt Serum Proteins) - HRP

Alternate names: GFP-Tag, Green fluorescent protein

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 (246aa) derived from the jellyfish *Aequorea victoria*

Format: **State:** Lyophilized purified 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: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, containing 10 mg/ml BSA (IgG and Protease free) as a stabilizer and 0.01% (w/v) Gentamicin Sulfate as a preservative.
Label: HRP – Horseradish Peroxidase
Reconstitution: Restore with 1.0 ml of deionized water or equivalent.

Applications: Polyclonal anti-GFP antibody is designed to detect GFP and its variants. This antibody can be used to detect GFP by ELISA (sandwich or capture) for the direct binding of antigen and recognizes wild type, recombinant and enhanced forms of GFP. Biotin conjugated polyclonal anti-GFP antibody used in a sandwich ELISA is well suited to titrate GFP in solution using this antibody in combination with a monoclonal anti-GFP antibody (Cat#R1461P) using either form of the antibody as the capture or detection antibodies.
However, use the monoclonal form only for the detection of wild type or recombinant

GFP as this form does not sufficiently detect 'enhanced' GFP. The detection antibody is typically conjugated to biotin and subsequently reacted with streptavidin conjugated HRP. Fluorochrome conjugated polyclonal anti-GFP antibody can be used to detect GFP by immunofluorescence microscopy in prokaryotic (E.coli) and eukaryotic (CHO cells) expression systems and can detect GFP containing inserts. Significant amplification of signal is achieved using fluorochrome conjugated polyclonal anti-GFP antibody relative to the fluorescence of GFP alone.
For Immunoblotting use either Alkaline Phosphatase or Peroxidase conjugated polyclonal anti-GFP antibody to detect GFP or GFP containing proteins on western blots.
Recommended Dilutions:
ELISA: 1/10,000-1/50,000.
Western blot: 1/2,000-1/5,000.
Immunohistochemistry: 1/500-1/2,000.
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-Goat Serum, anti-Peroxidase and purified and partially purified Green Fluorescent Protein (Aequorea victoria).
No reaction was observed against Human, Mouse and Rat Serum Proteins.

Add. Information:

Do **Not** Add Sodium Azide.

Storage:

Store vial at 2-8°C prior to restoration.
Restore with deionized water or equivalent; centrifuge product if not completely clear after standing at room temperature.
This product is stable for one month at 2-8°C as an undiluted liquid.
For extended storage aliquot contents and freeze at -20°C or below.
Avoid repeated freezing and thawing.
Dilute only prior to immediate use.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:

1. Katebi A, Gholami E, Taheri T, Zahedifard F, Habibzadeh S, Taslimi Y, et al. Leishmania tarentolae secreting the sand fly salivary antigen PpSP15 confers protection against Leishmania major infection in a susceptible BALB/c mice model. Mol Immunol. 2015 Oct;67(2 Pt B):501-11. doi: 10.1016/j.molimm.2015.08.001. Epub 2015 Aug 19. PubMed PMID: 26298575.

TRITC conjugated antibody is cited in:

2. Suzuki Y, Mogami H, Ihara H, Urano T. Unique secretory dynamics of tissue plasminogen activator and its modulation by plasminogen activator inhibitor-1 in vascular endothelial cells. Blood. 2009 Jan 8;113(2):470-8. doi: 10.1182/blood-2008-03-144279. Epub 2008 Oct 15. PubMed PMID: 18922856.
3. Reschka, EJ;Nordzieke, S;Valerius, O;Braus, GH;Pöggeler, S. A novel STRIPAK complex component mediates hyphal fusion and fruiting-body development in filamentous fungiMol. Microbiol. 2018, PubMed PMID: 30107058.
4. Reschka, EJ. Functional analysis of STRIPAK complex components in the filamentous ascomycete Sordaria macrospora. Thesis

2018, https://core.ac.uk/download/pdf/160269816.pdf

Unconjugated antibody is cited in:
3. Niv F, Keiner S, Krishna -, Witte OW, Lie DC, Redecker C. Aberrant neurogenesis after stroke: a retroviral cell labeling study. Stroke. 2012 Sep;43(9):2468-75. doi: 10.1161/STROKEAHA.112.660977. Epub 2012 Jun 26. PubMed PMID: 22738919.

General Readings:

1. Farr & Nakane, J. Immunol. Methods 47; 129-144. 1981 (Conjugation).