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Product datasheet for R1091P

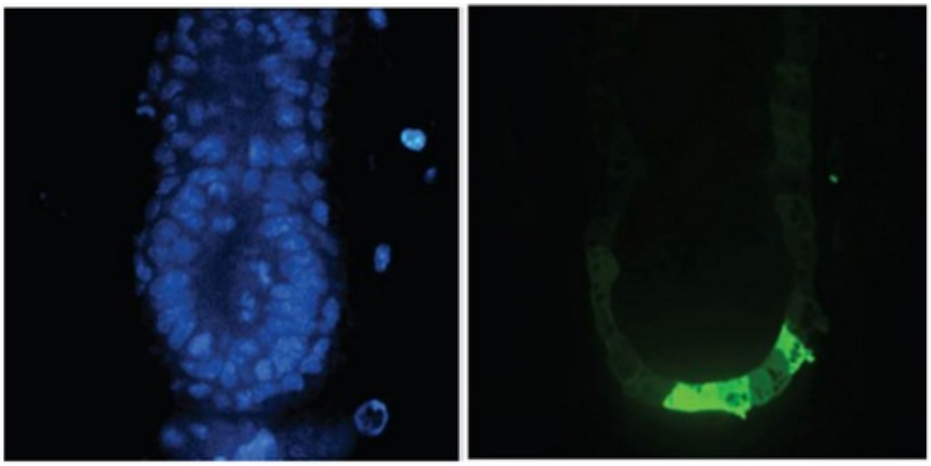
GFP (Ads. to Hu, Ms, Rt Serum Proteins) Goat Polyclonal Antibody

Product data:

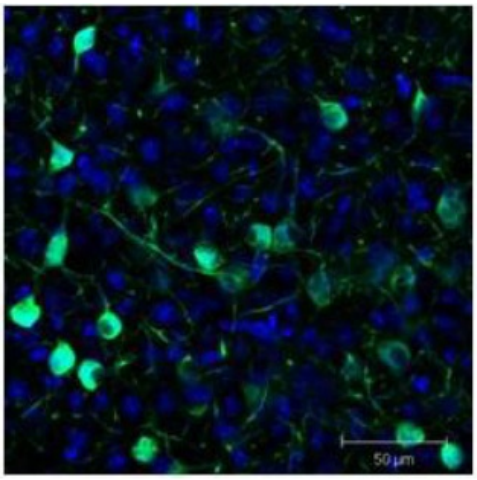
Product Type:	Primary Antibodies
Applications:	ELISA, IF, IHC, WB
Recommended Dilution:	Polyclonal anti-GFP antibody is designed to detect GFP and its variants. This antibody can be used to detect GFP by **ELISA** (Sandwich or Capture) for the direct binding of antigen and recognizes wild type, recombinant 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.-No 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 (Cat.-No RA021HRP). 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: 1/10,000-1/30,000. Immunofluorescence: 1/500. Western blot: 1/1,000-1/10,000. Immunohistochemistry: 1/200-1/1,000.
Host:	Goat
Clonality:	Polyclonal
Immunogen:	Green Fluorescent Protein (GFP) fusion protein corresponding to the full length amino acid sequence (246 aa) derived from the jellyfish *Aequorea victoria*
Specificity:	Detects wt GFP, rGFP and eGFP. Assay by Immunoelectrophoresis resulted in a single precipitin arc against anti-Goat serum and purified and partially purified Green Fluorescent Protein (Aequorea victoria) serum. No reaction was observed against Human, Mouse or Rat serum proteins.

Formulation:	0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2 State: Aff - Purified State: Liquid (sterile filtered) purified Ig fraction Stabilizer: None Preservative: 0.01% (w/v) Sodium Azide
Concentration:	lot specific
Purification:	Immunoaffinity Chromatography using Green Fluorescent Protein (Aequorea victoria) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Database Link:	P42212
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.
Synonyms:	Green fluorescent protein, GFP-Tag

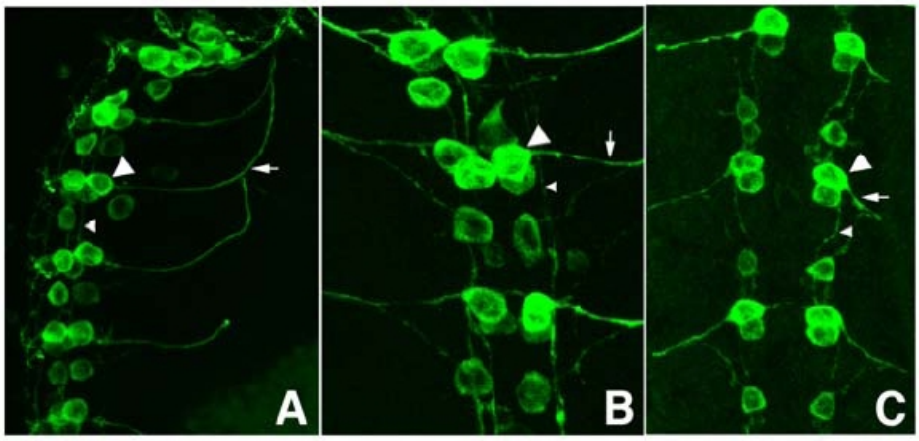
Product images:



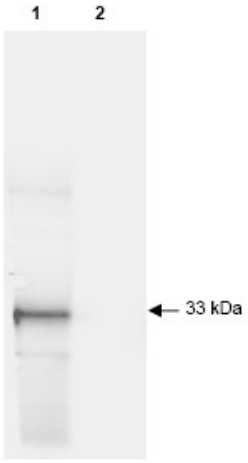
Immunofluorescence Microscopy of Anti-GFP (GOAT) Antibody: Tissue: E5.5 Hex-GFP transgenic mouse embryo. Primary antibody: Goat anti-GFP was used at 1/500 dilution. Secondary antibody: Fluorchrome conjugated Anti-goat IgG secondary antibody at 1/10,000 for 45 min at RT. Staining: GFP as green fluorescent signal with DAPI blue counterstain.



Immunofluorescence Microscopy of GFP-GOAT-Antibody. Tissue: Sf-1:Cre mice crossed to the Z/EG reporter line. Mouse brain (coronal view, 20X magnification). Fixation: 4%PFA/PBS with o/n fixation, and subsequently transferred to a 30% sucrose solution. Antigen retrieval: frozen in OCT freezing medium (Sakura) and cryostat sectioned at 40 microns. Primary antibody: Goat anti-GFP was used at 1/500 dilution in free floating imunnohistochemistry to detect GFP. Secondary antibody: Fluorchrome conjugated Anti-goat IgG secondary antibody was used for detection at 1/500 at 1/10,000 for 45 min at RT. Localization: Sf-1+ neurons and their processes of the ventromedial nucleus of the hypothalamus. Staining: eGFP as green fluorescent signal and sections were counterstained with DAPI.



Immunofluorescence Microscopy: Polyclonal anti-GFP antibody at a 1/1,000 dilution detects tau-GFP in cell bodies (large arrowhead) and axons of motorneurons (arrow) and interneurons (small arrowhead) in Drosophila melanogaster late stage embryonic central nervous system. AlexaFluor 488(TM) conjugated anti-Goat antibody was used for detection at 1/300. Panel A shows a lateral view (ventral left) and Panels B and C show ventral views of whole mount embryos at 63x magnification (plus 2x digital zoom). In all panels, anterior is up. Personal Communication, Helmata Mistry, Washington University School of Medicine, St. Louis, MO.



Western blot of GFP recombinant protein detected with Polyclonal anti-GFP antibody (R1091P). Lane 1 shows blot results where GFP recombinant protein was expressed in HeLa cells. Lane 2 shows control staining of HeLa lysate not expressing GFP. Polyclonal anti-GFP antibody detects a 33 kDa band corresponding to the epitope tag GFP. A 4-12% Bis-Tris gradient gel was used for SDS-PAGE. The protein was transferred to Nitrocellulose using standard methods. After blocking the membrane was probed with the primary antibody diluted to 1.0 µg/ml for 1 h at room temperature followed by washes and reaction with a 1/2,500 dilution of IRDye(R) 800 conjugated Donkey-a-Goat IgG [H&L]. IRDye(R)800 fluorescence image was captured using the Odyssey(R) Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.