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www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 600-302-215

GFP Antibody Fluorescein Conjugated

Overview

Description:	Anti-GFP (MOUSE) Monoclonal Antibody Fluorescein Conjugated - 600-302-215
Item No.:	600-302-215
Size:	1 mg
Applications:	Dot Blot, WB, FC, IF, IHC, Multiplex
Reactivity:	GFP, eGFP, rGFP
Host Species:	Mouse

Product Details

Background:	Green fluorescent protein is a 27 kDa protein produced from the jellyfish Aequorea victoria, which emits green light (emission peak at a wavelength of 509nm) when excited by blue light. GFP is an important tool in cell biology research. GFP is widely used enabling researchers to visualize and localize GFP-tagged proteins within living cells without the need for chemical staining.
Synonyms:	mouse anti-GFP antibody FITC conjugation, fluorescein conjugated mouse anti-GFP antibody, Green Fluorescent Protein, GFP antibody, Green Fluorescent Protein antibody, EGFP, enhanced Green Fluorescent Protein, Aequorea victoria, Jellyfish
Host Species:	Mouse
Conjugate:	Fluorescein (FITC)
Clonality:	Monoclonal
Clone ID:	9F9.F9
Format:	IgG

Target Details

Reactivity:	GFP, eGFP, rGFP
Immunogen Type:	Recombinant Protein

Immunogen:	Anti-Green Fluorescent Protein (GFP) is produced by immunizing GFP containing fusion protein that corresponds to the full length amino acid sequence (246aa) derived from the jellyfish Aequorea victoria.
Purity/Specificity:	GFP Fluorescein Conjugated Antibody was prepared from tissue culture supernatant by Protein A affinity chromatography. Assay by Immunoelectrophoresis resulted in a single precipitin arc against anti-fluorescein and anti-Mouse Serum. Reactivity is observed against recombinant Green Fluorescent Protein (000-001-215, recombinant GFP from Aequorea victoria) by Western blot. No reaction is seen against RFP.
Relevant Links:	• UniProtKB - P42212

Application Details

Tested Applications:	Dot Blot, WB
Suggested Applications:	FC, IF, IHC, Multiplex (Based on references)
Application 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 Rockland's polyclonal anti-GFP (600-101-215) 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 (code # S000-03) 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. This antibody was tested by western blotting, for immunoblotting use either alkaline phosphatase or peroxidase conjugated anti-GFP to detect GFP or GFP containing proteins on western blots. Optimal titers for applications should be determined by the researcher.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000 - 1:40,000
IF:	1:500 - 1:2,500
WB:	1:10,000-1:25,000

Formulation

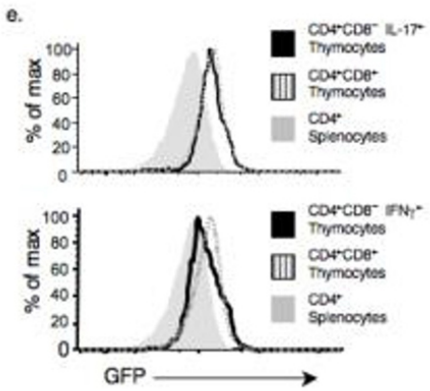
Physical State:	Lyophilized
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free

Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

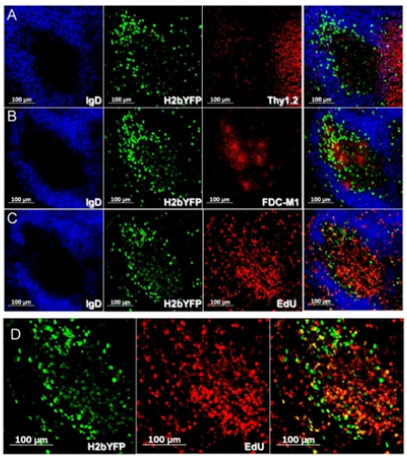
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

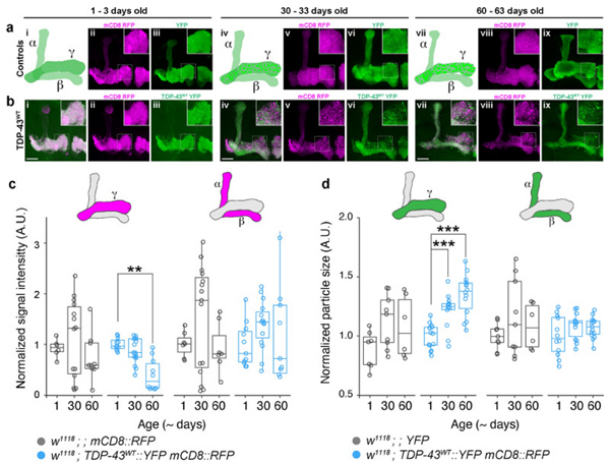
Images



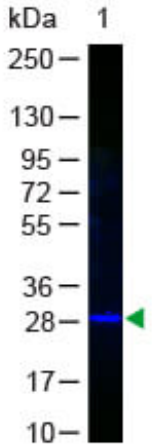
Flow Cytometry
(e) GFP expression in indicated thymocyte subsets from DTg RAG2:GFP mice was measured using flow cytometry. CD4+CD8+ double positive (DP) thymocytes and CD4+ splenocytes were used as positive and negative controls, respectively. Fig 2.
PMID: 19734905



Immunofluorescence Microscopy
Serial sections through a representative splenic GC recovered at day 16 post-infection, co-stained with markers to localize infected cells within specific germinal center compartments. Sections were stained with anti- IgD to delineate the mantle zone surrounding the GC and anti-GFP to detect infected cells. To detect the T cell zone, sections were co-stained with anti-Thy 1.2 (row A). The light zone is detected by the presence of follicular dendritic cells stained with anti-FDC-M1 (row B). Rapidly dividing centroblasts are found in the dark zone, and can be detected by increased incorporation of EdU (row C). Row D shows the h2bYFP and EdU panels from row C overlayed without IgD to identify proliferating H2bYFP positive cells. Fig 5. PMID: 22427999



Immunofluorescence Microscopy
Mushroom body lobes (MBLs) show age-related, region-specific TDP-43WT accumulation and axonal fragmentation. a Illustrations of MBLs targeted by TDP-43WT OE and observed changes with age (i, intact in young flies; iv, increasingly punctate TDP-43 YFP by middle-age; vii, axonal thinning and evidence of degeneration specifically in the γ lobe). These are presented alongside morphology of young (ii, iii,) middle-aged (v, vi) and old (viii, ix) control flies expressing membrane-bound RFP (mCD8 RFP) or cytoplasmic YFP. b Over expression of TDP-43WT YFP in MBNs results in axonal localization of TDP-43 in young adult flies (iii) and dystrophic neurites in middle-aged (v) and old (viii) flies. c Signal intensity of mCD8 RFP with age in γ (left) and α/β (right) lobes. d Changes in TDP-43WT YFP particle size with age in γ (left) and α/β (right) lobes. Data for TDP-43G298S presented in Fig. 2-supplement 1. Scale bar = 25 µm * = P < 0.05; ** = P < 0.01; *** = P < 0.001. Fig 2. PMID: 37864255



Western Blot
Western Blot of GFP Antibody Fluorescein Conjugated. Lane 1: GFP. Load: 50 ng per lane. Primary antibody: none. Secondary antibody: Fluorescein Conjugated Mouse Anti-GFP at 1:1000 for 60 min at RT. Block: 1% BSA-TTBS for 30 min at RT. Predicted/Observed size: 28 kDa, 28 kDa.

References

- Godfrey RK et al. Modelling TDP-43 proteinopathy in Drosophila uncovers shared and neuron-specific targets across ALS and FTD relevant circuits. *Acta Neuropathol Commun.* (2023)
- Collins, CM et al. Tracking murine gammaherpesvirus 68 infection of germinal center B cells in vivo. *PloS One* (2012)
- Marks BR et al. Thymic self-reactivity selects natural interleukin 17-producing T cells that can regulate peripheral inflammation. *Nat Immunol.* (2009)
- Athena M Soulika et al. Initiation and progression of axonopathy in experimental autoimmune encephalomyelitis. *J Neurosci.* (2009)

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