Order online now!

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

Datasheet for 600-901-B12

GFP Antibody

Overview

Description:	Anti-GFP (CHICKEN) Antibody - 600-901-B12
Item No.:	600-901-B12
Size:	300 µg
Applications:	ELISA, WB, EM, IF, IHC, IP, Multiplex, Purification
Reactivity:	GFP, eGFP, rGFP
Host Species:	Chicken

Product Details

Background:	Anti-GFP is designed for immunofluorescence microscopy, fluorescence based plate assays (FLISA) and fluorescent western blotting. This product is also suitable for multiplex analysis, including multicolor imaging, utilizing various commercial platforms. Chicken IgY lacks the classic "Fc" domain and does not bind to mammalian IgG Fc receptors. Thus resulting in lower backgrounds for western blotting, ELISA and Immunohistochemistry.
Synonyms:	chicken anti-GFP antibody, Green Fluorescent Protein, GFP antibody, Green Fluorescent Protein antibody, EGFP, enhanced Green Fluorescent Protein, Aequorea victoria, Jellyfish
Host Species:	Chicken
Clonality:	Polyclonal
Format:	IgY

Target Details

Reactivity:	GFP, eGFP, rGFP
Immunogen Type:	Recombinant Protein
Immunogen:	The immunogen is a Green Fluorescent Protein (GFP) fusion protein corresponding to the full length amino acid sequence (246aa) derived from the jellyfish Aequorea victoria.

Purity/Specificity:	Anti-GFP Antibody was prepared from egg yolks by immunoaffinity chromatography using Green Fluorescent Protein (Aequorea victoria) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Chicken Serum and purified and partially purified Green Fluorescent Protein (Aequorea victoria). No reaction was observed against Human, Mouse or Rat serum proteins.

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	EM, IF, IHC, IP, Multiplex, Purification (Based on references)
Application Note:	Polyclonal anti-GFP is designed to detect GFP and its variants. Anti-GFP antibody has been tested by ELISA and western blot and is suitable for immunofluorescence. 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 used in a sandwich ELISA is well suited to titrate GFP in solution using this antibody in combination with Rockland's monoclonal anti-GFP (600-301-215) 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 (code # S000-03). Fluorochrome conjugated polyclonal anti-GFP 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 relative to the fluorescence of GFP alone. For immunoblotting use either alkaline phosphatase or peroxidase conjugated polyclonal anti-GFP to detect GFP or GFP containing proteins on western blots.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000 - 1:120,000
IF:	User Optimized
IHC:	1:200 - 1:1,000
WB:	1:1,000 - 1:5,000

Formulation

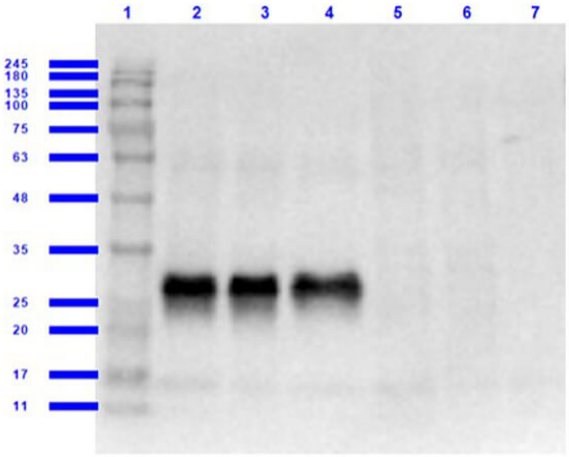
Physical State:	Liquid (sterile filtered)
Concentration:	1.06 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

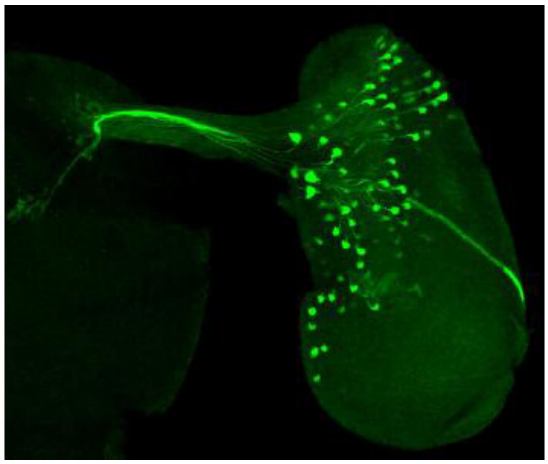
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store GFP Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. 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.

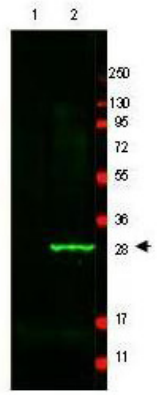
Images



Western Blot
Western Blot Results of Chicken Anti-GFP Antibody. Lane 1: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 2: GFP (p/n 000-001-215) / HeLa WCL (p/n W09-000-364) [0.05µg/10µg]. Lane 3: GFP (p/n 000-001-215) / NIH3T3 WCL (p/n W10-000-371) [0.05µg/10µg]. Lane 4: GFP (p/n 000-001-215) / PC-12 WCL (p/n W120-001-GL9) [0.05µg/10µg]. Lane 5: HeLa WCL (p/n W09-000-364) [10µg]. Lane 6: NIH3T3 WCL (p/n W10-000-371) [10µg]. Lane 7: PC-12 WCL (p/n W120-001-GL9) [10µg]. Primary Antibody: Anti-GFP at 1.0µg/mL overnight at 2-8°C. Secondary Antibody: Goat Anti-Chicken IgG HRP (p/n 603-103-126) at 1:40,000 for 30 mins at RT. Block: MB-070 Buffer for 1hr at RT. Predicted MW: 27kda. Exposure: 2 seconds.

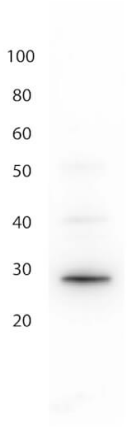


Immunofluorescence Microscopy
Immunofluorescence Microscopy of Chicken anti-GFP antibody. Tissue: KruppleGAL4 driver line in Drosophila eye disc. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: anti-GFP antibody diluted 1:500 for 2 hr at RT. Secondary antibody: Alexa™488 conjugated anti-Chicken IgG at 1:300 for 1 hr at RT. Blocking: 5% NGS in PBS with 0.1% Triton X-100 for 15 min. Localization: E2F-1 pS364 is nuclear and occasionally cytoplasmic. Staining: recombinant tau-myc-GFP protein as green fluorescent signal.



Western Blot

Western Blot of Anti-GFP antibody. Lane 1: mouse spleen lysate. Lane 2: mouse spleen lysate spiked with 50 ng of wt GFP. Load: 20 µg per lane. Primary antibody: GFP antibody at 2 µg/ml for 2 hr at room temperature. Secondary antibody: IRDye™800 Conjugated Affinity Purified anti-Chicken IgG [H&L] [Goat] MX10 (p/n 603-132-126) at 1:20,000 for 45 min at RT. Block: 5% BSA in PBS 2 hr at room temperature. Predicted/Observed size: 27 kDa for GFP epitope tag. Other band(s): none.



Western Blot

Western Blot of Anti-GFP (CHICKEN) antibody. Lane 1: MW. Lane 2: GFP (p/n 000-001-215) Load: 0.05 µg. Primary antibody: Anti-GFP (CHICKEN) antibody (p/n 600-901-B12) was used at 1:1000 overnight at 4°C. Secondary antibody: Anti-Chicken IgG (GOAT) peroxidase conjugated (p/n 603-103-126) secondary antibody was used at 1:40,000 in Blocking Buffer for Fluorescent Western Blotting (p/n MB-070). Block: 1% BSA-TTBS (p/n MB-013, diluted to 1X) 30 min at 20°C. Predicted/Observed size: 27 kDa for GFP. Other band(s): none.

References

- Stern DB et al. Anatomical Connectivity of the Intercalated Cells of the Amygdala. *eNeuro.* (2023)
- Shoenhard H et al. The calcium-sensing receptor (CaSR) regulates zebrafish sensorimotor decision making via a genetically defined cluster of hindbrain neurons. *Cell Rep.* (2022)
- Ciesielski HM et al. Erebosis, a new cell death mechanism during homeostatic turnover of gut enterocytes. *PLoS Biol.* (2022)
- Lamontagne, JO et al. Transcription factors AP-2α and AP-2β regulate distinct segments of the distal nephron in the mammalian kidney. *Nature Communications* (2022)
- Lyu C et al. Building an allocentric travelling direction signal via vector computation. *Nature.* (2022)
- Zhao X et al. 4D imaging analysis of the aging mouse neural stem cell niche reveals a dramatic loss of progenitor cell dynamism regulated by the RHO-ROCK pathway. *Stem Cell Reports.* (2022)
- Groschner LN et al. A biophysical account of multiplication by a single neuron. *Nature* (2022)

- Li, Y et al. Genetic analysis of the septal peptidoglycan synthase FtsWI complex supports a conserved activation mechanism for SEDS-bPBP complexes. *PloS Genetics* (2021)
- Wang, Q et al. The Extracellular Superoxide Dismutase Sod5 From Fusarium oxysporum Is Localized in Response to External Stimuli and Contributes to Fungal Pathogenicity. *Frontiers in Plant Science* (2021)
- Osso LA et al. Experience-dependent myelination following stress is mediated by the neuropeptide dynorphin. *Neuron.* (2021)
- Oti T et al. Oxytocin influences male sexual activity via non-synaptic axonal release in the spinal cord. *Curr Biol.* (2021)
- Sanders DW et al. Competing protein-RNA interaction networks control multiphase intracellular organization. *Cell.* (2020)
- Duan ZRS et al. GABAergic restriction of network dynamics regulates interneuron survival in the developing cortex. *Neuron.* (2020)
- Nam HS, Capecchi MR. Lrig1 expression prospectively identifies stem cells in the ventricular-subventricular zone that are neurogenic throughout adult life. *Neural Dev.* (2020)
- Wu et al. let-7-Complex MicroRNAs Regulate Broad-Z3, Which Together with Chinmo Maintains Adult Lineage Neurons in an Immature State. *G3 Genes Genomics Genetics* (2020)
- Goswami et al. Novel window for cancer nanotheranostics: non-invasive ocular assessments of tumor growth and nanotherapeutic treatment efficacy in vivo. *Biomedical Optics Express* (2019)
- Brito, C et al. Perfringolysin O-Induced Plasma Membrane Pores Trigger Actomyosin Remodeling and Endoplasmic Reticulum Redistribution. *Toxins* (2019)
- Liu, W et al. Alp7-Mto1 and Alp14 synergize to promote interphase microtubule regrowth from the nuclear envelope. *Journal of Molecular Cell Biology* (2019)
- Fujiwara Y et al. The CCHamide1 Neuropeptide Expressed in the Anterior Dorsal Neuron 1 Conveys a Circadian Signal to the Ventral Lateral Neurons in Drosophila melanogaster. *Front Physiol.* (2018)
- Kronenberg G et al. Distinguishing features of microglia-and monocyte-derived macrophages after stroke. *Acta Neuropathol.* (2018)
- Oti T et al. Effects of sex steroids on the spinal gastrin-releasing peptide system controlling male sexual function in rats. *Endocrinology.* (2018)
- Ribeiro IMA, Drews M, Bahl A, Machacek C, Borst A, Dickson BJ. Visual Projection Neurons Mediating Directed Courtship in Drosophila. *Cell.* (2018)
- Chiu et al. Input-Specific NMDAR-Dependent Potentiation of Dendritic GABAergic Inhibition. *Neuron* (2018)
- Li et al. Hub-organized parallel circuits of central circadian pacemaker neurons for visual photoentrainment in Drosophila. *Nature Communications* (2018)
- Maruoka et al. Nectin-4 co-stimulates the prolactin receptor by interacting with SOCS1 and inhibiting its activity on the JAK2-STAT5a signaling pathway. *Journal of Biological Chemistry* (2017)
- Neukomm LJ et al. Axon death pathways converge on axundead to promote functional and structural axon disassembly. *Neuron.* (2017)
- Kim, AJ et al. Quantitative Predictions Orchestrate Visual Signaling in Drosophila. *Cell* (2017)

- Boye et al. Highly Efficient Delivery of Adeno-Associated Viral Vectors to the Primate Retina. *Human Gene Therapy* (2016)
- Chen et al. Lin-28 promotes symmetric stem cell division and drives adaptive growth in the adult Drosophila intestine. *Development* (2015)
- Vladimir A Volkov et al. Long tethers provide high-force coupling of the Dam1 ring to shortening microtubules. *Proc Natl Acad Sci U S A.* (2013)
- He M. miRNA Tagging and Affinity-purification (miRAP). *Bio Protoc* (2012)
- Tseng C-Y, Firestein BL. The role of PSD-95 and cypin in morphological changes in dendrites following sublethal NMDA exposure. *J. Neurosci.* (2011)
- Oleinikov AV et al. High throughput functional assays of the variant antigen PfEMP1 reveal a single domain in the 3D7 Plasmodium falciparum genome that binds ICAM1 with high affinity and is targeted by naturally acquired neutralizing antibodies. *PloS Pathogens* (2009)

Disclaimer