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TP401 Polyclonal Antibody to GFP - Purified

Alternate names: GFP-Tag, Green fluorescent protein

Quantity: 0.2 mg

Background: Green fluorescent protein (GFP) is a spontaneously fluorescent protein isolated from the Pacific *jellyfish, Aequorea victoria*. It transduces the blue chemiluminescence into green fluorescent light. Since the molecular cloning of GFP cDNA1 and demonstration that GFP can be expressed as a functional transgene2, GFP has become a new tool with exciting applications in developmental, cell and molecular biology3. GFP is an ideal fluorescent probe: its fluorescence is not species specific and can be expressed in bacteria, yeast, plant and mammalian cells; it can fuse with proteins of interest without interfering significantly with their assembly or function.

Uniprot ID: P42212

NCBI: 6100

Host: Rabbit

Immunogen: *E.coli* expressed full-length GFP (Green Fluorescent Protein).

Format:
State: Lyophilized purified IgG fraction
Purification: Protein A Chromatography
Preservatives: 0.09% Sodium Azide
Reconstitution: Restore to 1 mg/ml by adding 0.2 ml water.

Applications:
ELISA.
Western blot: 1/5,000.
Immunoprecipitation: 1/200-1/500.
The antibody has successfully been used in **Immunohistochemistry** on Vibratome sections and in Filter Binding Assays.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody reacts with wild-type GFP, and its variants such as EGFP and EBFP.

Add. Information: This product was originally produced by Torrey Pine Biolabs

Storage:
Store the antibody undiluted at 2-8°C for one month
or (in small aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch

Product Citations:
Purchased from Acris:
1. Albert M, Jehle AK, Mueller K, Eisele C, Lipschis M, Felix G. Arabidopsis thaliana pattern recognition receptors for bacterial elongation factor Tu and flagellin can be combined to form functional chimeric receptors. J Biol Chem. 2010 Jun 18;285(25):19035-42. doi: 10.1074/jbc.M110.124800. Epub 2010 Apr 21. PubMed PMID: 20410299.
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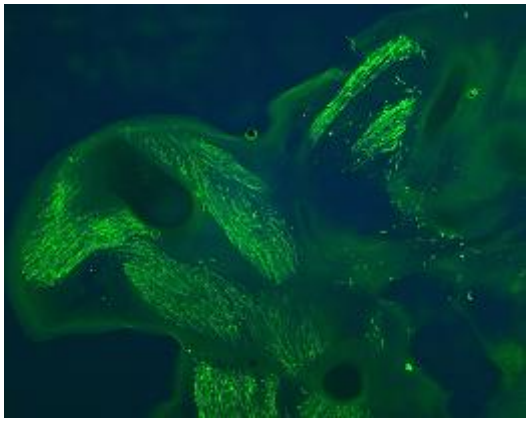
Proteomics. 2006 Sep;5(9):1658-66. Epub 2006 Jul 5. PubMed PMID: 16825183.
3. Li N, Kelsh RN, Croucher P, Roehl HH. Regulation of neural crest cell fate by the retinoic acid and Pparg signalling pathways. Development. 2010 Feb;137(3):389-94. doi: 10.1242/dev.044164. PubMed PMID: 20081187.
4. Poulin LF, Henri S, de Bovis B, Devilard E, Kissenpfennig A, Malissen B. The dermis contains langerin+ dendritic cells that develop and function independently of epidermal Langerhans cells. J Exp Med. 2007 Dec 24;204(13):3119-31. Epub 2007 Dec 17. PubMed PMID: 18086861.
5. Yusuf F, Rehimi R, Moroşan-Puopolo G, Dai F, Zhang X, Brand-Saberi B. Inhibitors of CXCR4 affect the migration and fate of CXCR4+ progenitors in the developing limb of chick embryos. Dev Dyn. 2006 Nov;235(11):3007-15. PubMed PMID: 16958136.
6. Blachon S, Bellanger S, Demeret C, Thierry F. Nucleo-cytoplasmic shuttling of high risk human Papillomavirus E2 proteins induces apoptosis. J Biol Chem. 2005 Oct 28;280(43):36088-98. Epub 2005 Aug 31. PubMed PMID: 16135518.
7. Sampaio KL, Cavignac Y, Stierhof YD, Sinzger C. Human cytomegalovirus labeled with green fluorescent protein for live analysis of intracellular particle movements. J Virol. 2005 Mar;79(5):2754-67. PubMed PMID: 15708994.
8. Rynes J, Donohoe CD, Frommolt P, Brodesser S, Jindra M, Uhlirova M. Activating transcription factor 3 regulates immune and metabolic homeostasis. Mol Cell Biol. 2012 Oct;32(19):3949-62. doi: 10.1128/MCB.00429-12. Epub 2012 Jul 30. PubMed PMID: 22851689.
9. Borner, K. Roles of nucleosome remodeling factors ACF1 and Domino during Drosophila melanogaster oogenesis. Thesis 2017. https://edoc.ub.uni-muenchen.de/20348/1/Boerner_Kenneth.pdf.
10. Alekseev, S;Nagy, Z;Sandoz, J;Weiss, A;Egly, JM;Le May, N;Coin, F. Transcription without XPB Establishes a Unified Helicase-Independent Mechanism of Promoter Opening in Eukaryotic Gene Expression. Mol. Cell 2017, 504-514.e4. 65, 3. PubMed PMID: 28157507.

General Readings:

1. Prasher DC, Eckenrode VK, Ward WW, Prendergast FG, Cormier MJ. Primary structure of the Aequorea victoria green-fluorescent protein. Gene. 1992 Feb 15;111(2):229-33. PubMed PMID: 1347277.
2. Chalfie M, Tu Y, Euskirchen G, Ward WW, Prasher DC. Green fluorescent protein as a marker for gene expression. Science. 1994 Feb 11;263(5148):802-5. PubMed PMID: 8303295.
3. Tsien RY. The green fluorescent protein. Annu Rev Biochem. 1998;67:509-44. PubMed PMID: 9759496.

Pictures:

Lineage tracing of EGFP expressing migrating pectoral girdle myogenic precursors in the chicken embryos via electroporation using TOL-2-GFP plasmid system. Vibratome sections stained with anti-GFP antibody Cat.-No. TP401 show the labeled muscle fiber soft hepectoral girdle in chicken embryos at stage HH27. Data was kindly provided by: Nargis Khalida, Rizwan Rehimi: Institute of Anatomy, Dept. of Molecular Embryology, Ruhr University Bochum, Germany



Western blot detection of GFP-MIP2 fusion protein in transfectant by anti-GFP antibody.