Datasheet for ABIN100085
anti-GFP antibody

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Overview

Quantity:	100 µL
Target:	GFP
Reactivity:	Aequorea victoria
Host:	Goat
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA, Fluorescence Microscopy (FM)

Product Details

Purpose:	Goat Anti-GFP is ideal for western blotting, ELISA, Immunohistochemistry and IP.
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. Immunogentype: Recombinant
Isotype:	IgG
Specificity:	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum and purified and partially purified Green Fluorescent Protein (Aequorea victoria). No reaction was observed against Human, Mouse or Rat serum proteins.
Cross-Reactivity (Details):	wt, rGFP, eGFP
Characteristics:	Anti-GFP is designed to detect GFP and its variants.
Purification:	GFP antibody was prepared from monospecific antiserum by immunoaffinity chromatography using Green Fluorescent Protein (Aequorea victoria) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities.

Product Details

Sterility:	Sterile filtered

Target Details

Target:	GFP
Alternative Name:	GFP (GFP Products)
Target Type:	Viral Protein
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: GFP, Green Fluorescent Protein, GFP antibody, Green Fluorescent Protein antibody, EGFP, enhanced Green Fluorescent Protein, Aequorea victoria, Jellyfish.
UniProt:	P42212

Application Details

Application Notes:	ELISA : 1:10,000 - 1:30,000 IF Microscopy : 1:500 Western Blot : 1:1,000 - 1:10,000 Immunohistochemistry: 1:200 - 1:1,000 ImmunoPrecipitation: Yes
Comment:	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 monoclonal anti-GFP (ABIN129564) using either form of the antibody as the capture or detection antibody. 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-HRP (ABIN964537). 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 detects GFP containing inserts. Significant amplification of signal is achieved using fluorochrome conjugated polyclonal anti-GFP relative to the fluorescence of GFP alone.

Application Details

	For immunoblotting use either alkaline phosphatase or peroxidase conjugated polyclonal anti-GFP to detect GFP or GFP-containing proteins on western blots. Researchers should determine optimal titers for applications.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid cycles of freezing and thawing.
Storage:	-20 °C
Storage Comment:	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.

Publications

Product cited in:	Lapraz, Boutres, Fixary-Schuster, De Queiroz, Plaçais, Cerezo, Besse, Préat, Noselli: "Asymmetric activity of NetrinB controls laterality of the Drosophila brain." in: **Nature communications**, Vol. 14, Issue 1, pp. 1052, (2023) (PubMed). Cone, Hurwitz, Lee, Yuan, Zhou, Li, Meckes: "Alix and Syntenin-1 direct amyloid precursor protein trafficking into extracellular vesicles." in: **BMC molecular and cell biology**, Vol. 21, Issue 1, pp. 58, (2020) (PubMed). Kim, Kim, Choi, Lee, Lee, Im, Shin, Kim, Hong, Kim, Kim, Sung: "Downregulated miR-18b-5p triggers apoptosis by inhibition of calcium signaling and neuronal cell differentiation in transgenic SOD1 (G93A) mice and SOD1 (G17S and G86S) ALS patients." in: **Translational neurodegeneration**, Vol. 9, Issue 1, pp. 23, (2020) (PubMed).

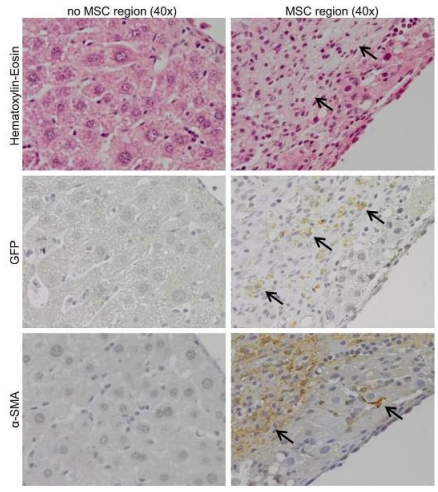
Publications

Saegusa, Hosoya, Nishiyama, Saeki, Fujimoto, Okano, Fujioka, Ogawa: "Low-dose rapamycin-induced autophagy in cochlear outer sulcus cells." in: **Laryngoscope investigative otolaryngology**, Vol. 5, Issue 3, pp. 520-528, (2020) (PubMed).

Nkosi, Sun, Duke, Patel, Surapaneni, Singh, Meckes: "Epstein-Barr Virus LMP1 Promotes Syntenin-1- and Hrs-Induced Extracellular Vesicle Formation for Its Own Secretion To Increase Cell Proliferation and Migration." in: **mBio**, Vol. 11, Issue 3, (2020) (PubMed).

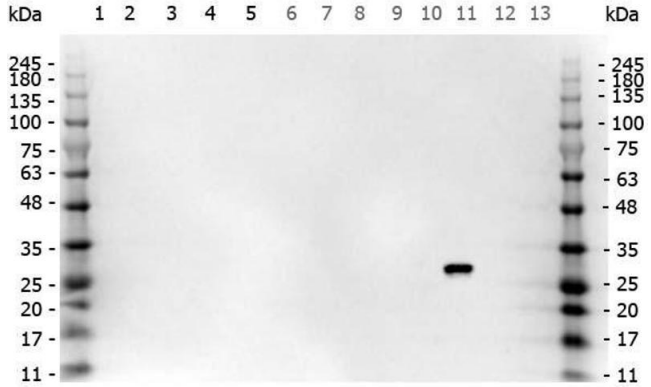
There are more publications referencing this product on: Product page

Images



Immunohistochemistry

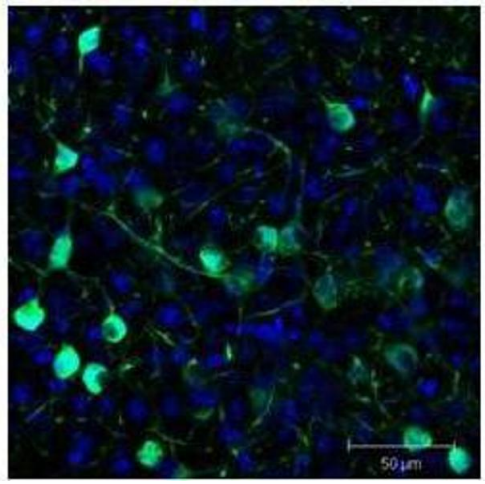
Image 1. MSCs are traced in special organized regions. MSC regions and normal regions in regenerated liver tissue of cirrhotic mice treated with pH x + 2 x 106 MSC stained for Haematoxylin-eosin, GFP and α-SMA (40x magnifications, MSCs are indicated by the black arrows). GFP, green fluorescent protein, α-SMA, smooth muscle actin, MSCs, mesenchymal stromal cells, pH x, partial hepatectomy Figure provided by CiteAb. Source: J Cell Mol Med, PMID: 31245923.



Western Blotting

Image 2. Western Blot of Goat anti-GFP antibody. Marker: Opal Pre-stained ladder . Lane 1: HEK293 lysate . Lane 2: HeLa Lysate . Lane 3: CHO/K1 Lysate . Lane 4: MDA-MB-231 . Lane 5: A431 Lysate . Lane 6: Jurkat Lysate . Lane 7: NIH/3T3 Lysate . Lane 8: E-coli HCP Control . Lane 9: FLAG Positive Control Lysate Lane 10: Red Fluorescent Protein . Lane 11: Green Fluorescent Protein . Lane 12: Glutathinoe-S-Transferase Protein Lane 13: Maltose Binding Protein . Load: 10 µg of lysate or 50ng of purified protein per lane. Primary antibody: GFP antibody at 1ug/mL overnight at 4C.

Secondary antibody: Peroxidase goat secondary antibody at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS for 30 min at RT. Predicted/Observed size: 30 kDa for GFP.



Immunofluorescence

Image 3. 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.

Please check the product details page for more images. Overall 15 images are available for ABIN100085.