Datasheet for ABIN302066

anti-GFP antibody

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Overview

Quantity:	0.1 mg
Target:	GFP
Reactivity:	Aequorea victoria
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GFP antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunocytochemistry (ICC)

Product Details

Immunogen:	EGFP, a native full-length protein
Specificity:	The polyclonal antibody **recognizes GFP, EGFP, EYFP fusion proteins** in all species.
Cross-Reactivity (Details):	Recognizes fusion proteins in all species
Purification:	Purified from rabbit serum by affinity chromatography
Purity:	> 95 % (by SDS-PAGE)

Target Details

Target:	GFP
Alternative Name:	GFP (GFP Products)
Target Type:	Viral Protein
Background:	Green fluorescence protein (GFP) is a 27 KDa protein derived from the bioluminiscent jellyfish

Target Details

Aquorea victoria, emiting green light (λ,=509 nm) when excited (excitation by Blue or UV light, absorption peak λ,=395 nm). GFP is a useful tool in cell biology research, as its intrinsic fluorescence can be visualized in living cells. Light-stimulated GFP fluorescence is species-independent and a fluorescence has been reported from many different types of GFP-expressing hosts, including microbes, invertebrates, vertebrates and plants. No exogenous substrates and cofactors are required for the fluorescence of GFP, since GFP autocatalytically forms a fluorescent pigment from natural amino acids present in the nascent protein. GFP fluorescence is stable under fixation conditions and suitable for a variety of applications. GFP is widely used as a reporter (tag) for gene expression, enabling researchers to visualize and localize GFP-tagged proteins within living cells without any further staining. Other applications of GFP include measurement of distance between proteins through fluorescence energy transfer (FRET) protocols. To increase a fluorescence intensity of GFP, chomophore mutations have been created. The EnhancedGFP has a fluorescence 35 times more intense than the wt-GFP. Mutagenesis of GFP has produced also many mutants (e.g. Yellow Fluorescent Protein, Cyan Fluorescent Protein) with warying spectral properties. Antibodies raised against full-length GFP variants should also detect other variants of the protein.

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

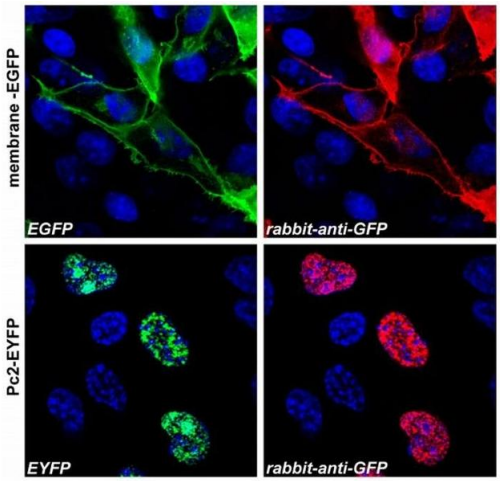
Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	**Do not freeze.**
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.

Publications

Product cited in:

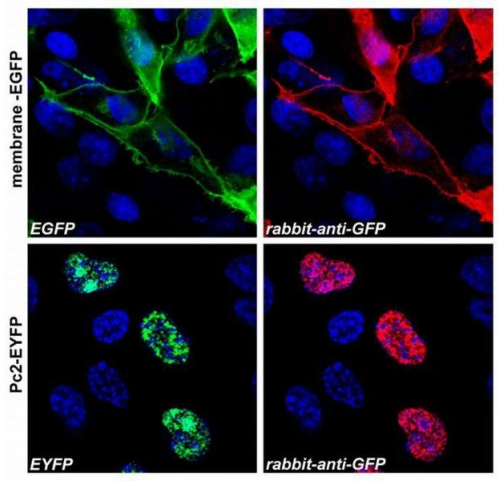
Zempel, Thies, Mandelkow, Mandelkow: "Abeta oligomers cause localized Ca(2+) elevation, missorting of endogenous Tau into dendrites, Tau phosphorylation, and destruction of microtubules and spines." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 30, Issue 36, pp. 11938-50, (2010) (PubMed).

Images



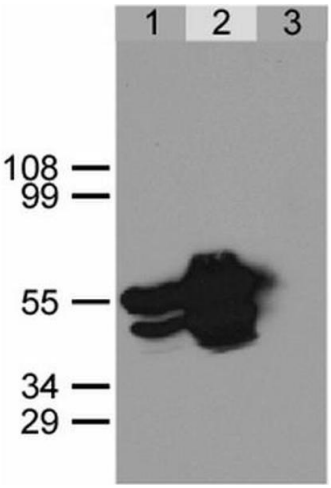
Immunocytochemistry

Image 1. Immunocytochemistry staining (confocal microscopy) of COS-7 cells transfected with expression constructs encoding membrane-tethered EGFP (membrane-EGFP, top) or nuclear Polycomb 2-EYFP fusion protein (Pc2-EYFP, bottom). The natural fluorescence of the produced proteins is shown in the green channel (left), polyclonal anti-GFP antibody signal was detected in the red channel (right). The system was carefully tested for overlap of these two optical channels and images were scanned separately in sequential scanning mode. The blue nuclear stain is also shown.



Confocal Microscopy

Image 2. Confocal microscopy Confocal microscopy images of COS-7 cells transfected with expression constructs encoding membrane-tethered EGFP (membrane-EGFP; top) or nuclear Polycomb 2-EYFP fusion protein (Pc2-EYFP; bottom). The natural fluorescence of the produced proteins is shown in the green channel (left), polyclonal anti-GFP antibody signal was detected in the red channel (right). The system was carefully tested for overlap of these two optical channels and images were scanned separately in sequential scanning mode. The blue nuclear stain is also shown.



Immunoprecipitation

Image 3. Confocal microscopy Confocal microscopy images of COS-7 cells transfected with expression constructs encoding membrane-tethered EGFP Fig. 2. Immunoprecipitation of GFP-NLS from HEK293 cells using anti-GFP antibody. HEK293 cells were transfected with expression construct encoding GFP-NLS protein. Twenty hours post transfection cells were lysed in non-denaturating conditions (Lysis buffer: 20 mM Tris, pH 7.5, 100 mM NaCl, 0.5% Triton X-100, inhibitors of proteases). Aliquots of cell lysate were immunoprecipitated using a (lane 2) or a pre-immune rabbit serum (lane 3). Immunoprecipitates together with a sample of the cell lysate (lane 1) were separated on SDS-PAGE polyacrylamide gel and immunoblotted with the anti-GFP antibody. The positions of molecular weight markers in kDa are indicated at the left.

