

Product datasheet

Biotin Anti-GFP antibody ab6658

★★★★★ [6 Abreviews](#) [115 References](#) [5 Images](#)

Overview

Product name	Biotin Anti-GFP antibody
Description	Biotin Goat polyclonal to GFP
Host species	Goat
Conjugation	Biotin
Specificity	Antibody recognizes wild type, recombinant and enhanced forms of GFP (EGFP). No reaction was observed against Human, Mouse and Rat Serum Proteins.
Tested applications	Suitable for: WB, IP, ICC/IF, Sandwich ELISA, IHC-P, IHC-Fr
Species reactivity	Reacts with: Species independent
Immunogen	Recombinant full length protein corresponding to GFP aa 1-246. Sequence: MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATY GKLTLLKFICTT GKLPVPWPTL VTTFSYGVQCFSRYPDHMKQHDFFKSAMPEGYVQERTI FFKDDGNYKTRAEVKFEGDTLV NRIELKGIDFKEDGNILGHKLEYNYN SHNVYIMADKQKNGIKVNFKIRHNIEDGSVQLAD HYQQNTPIGDGPVL LPDNHYLSTQSALS KDPNEKRDHMLLEFVTAAGITHGMD ELYK

Database link: [P42212](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

General notes

Designed to detect GFP and its variants in immunoblotting and immunoprecipitation.

Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) Biotin/Protein Ratio: 10-20 BAC molecules per goat IgG molecule.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.44% Potassium phosphate, 0.88% Sodium chloride 10 mg/mL BSA, immunoglobulin and protease free
Purity	Affinity purified
Purification notes	This product was prepared from monospecific antiserum by immunoaffinity chromatography using Green Fluorescent Protein (<i>Aequorea victoria</i>) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities.
Primary antibody notes	Designed to detect GFP and its variants in ELISA (sandwich or capture), immunoblotting and immunoprecipitation.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab6658 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (2)	1/2000 - 1/10000.
IP	★★★★★ (1)	Use at an assay dependent concentration.
ICC/IF	★★★★★ (1)	1/1000 - 1/5000.
Sandwich ELISA		Use at an assay dependent concentration.
IHC-P	★★★★★ (2)	1/250.
IHC-Fr		1/5000.

Target

Relevance **Function:** Energy-transfer acceptor. Its role is to transduce the blue chemiluminescence of the protein aequorin into green fluorescent light by energy transfer. Fluoresces in vivo upon receiving energy from the Ca²⁺-activated photoprotein aequorin.

Subunit structure: Monomer.

Tissue specificity: Photocytes.

Post-translational modification: Contains a chromophore consisting of modified amino acid residues. The chromophore is formed by autocatalytic backbone condensation between Ser-65 and Gly-67, and oxidation of Tyr-66 to didehydrotyrosine. Maturation of the chromophore requires nothing other than molecular oxygen.

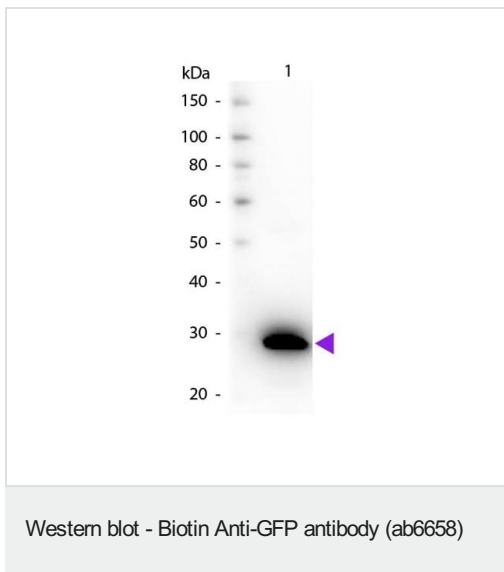
Biotechnological use: Green fluorescent protein has been engineered to produce a vast number of variously colored mutants, fusion proteins, and biosensors. Fluorescent proteins and its mutated allelic forms, blue, cyan and yellow have become a useful and ubiquitous tool for making chimeric proteins, where they function as a fluorescent protein tag. Typically they tolerate N- and C-terminal fusion to a broad variety of proteins. They have been expressed in most known cell types and are used as a noninvasive fluorescent marker in living cells and organisms. They enable a wide range of applications where they have functioned as a cell lineage tracer, reporter of gene expression, or as a measure of protein-protein interactions. Can also be used as a molecular thermometer, allowing accurate temperature measurements in fluids. The measurement process relies on the detection of the blinking of GFP using fluorescence correlation spectroscopy.

Sequence similarities: Belongs to the GFP family.

Biophysicochemical properties: Absorption: Abs(max)=395 nm

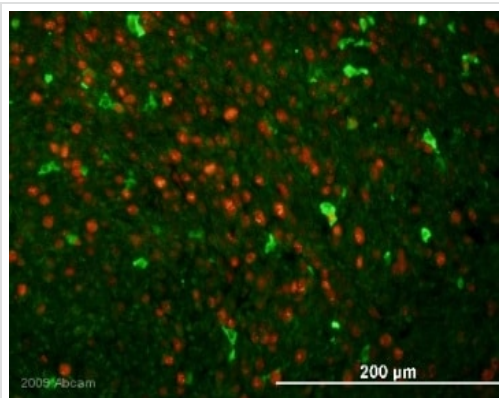
Exhibits a smaller absorbance peak at 470 nm. The fluorescence emission spectrum peaks at 509 nm with a shoulder at 540 nm.

Images



Biotin Anti-GFP antibody (ab6658)

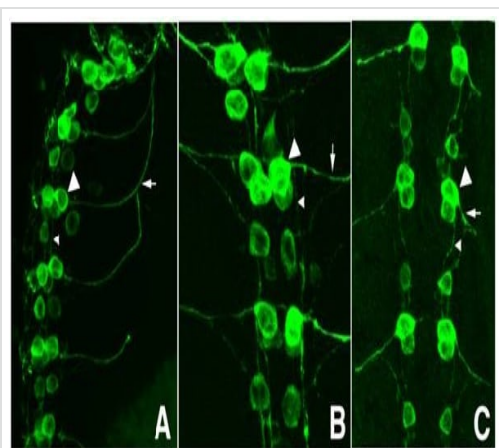
Additional bands at: 28 kDa. We are unsure as to the identity of these extra bands.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Biotin Anti-GFP antibody (ab6658)

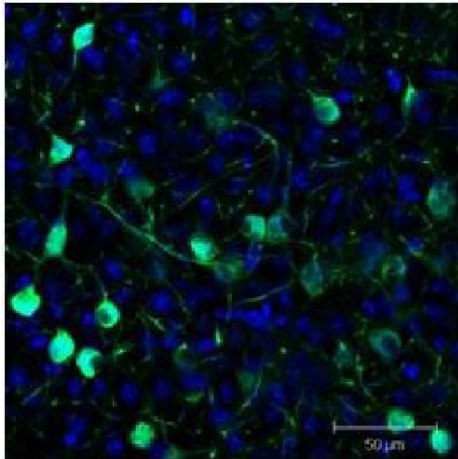
This image is a courtesy of Hongwei Shao

ab6658 staining GFP in human melanoma cells recovered from nude mice by Immunocytochemistry/ immunofluorescence. Cells were fixed with formaldehyde, permeabilized with 0.25% Triton X-100 RT for 10min and blocking with commercially available blocking buffer was performed for 30 minutes at RT. Samples were incubated with primary antibody (1:50) for 18 hours at 4°C. An Alexa Fluor®488-conjugated donkey polyclonal to goat IgG was used as secondary antibody at 1/100 dilution. Green color indicates GFP/Fibroblast cells, while red color indicates Ki67 positive cells, most of them are tumor cells (Abcam's [ab15580](#) was used for the detection).



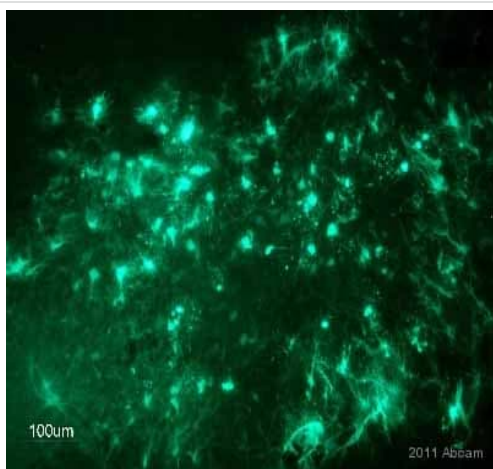
IHC - Wholemout - Biotin Anti-GFP antibody (ab6658)

Immunofluorescence Microscopy using ab6658. Tissue: *Drosophila melanogaster* late stage embryonic central nervous system. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: Anti-GFP antibody at a 1/1,000 for 1 h at RT. Secondary antibody: AlexaFluor 488™ conjugated anti-Goat antibody at 1/300 for 45 min at RT. Panel A: shows a lateral view (ventral left). Panels B and C: shows ventral views of whole mount embryos at 63x magnification (plus 2x digital zoom). In all panels, anterior is up. Staining: tau-GFP cell bodies (large arrowhead) and axons of motoneurons (arrow) and interneurons (small arrowhead) as green fluorescent signal.



Immunohistochemistry (Frozen sections) - Biotin
Anti-GFP antibody (ab6658)

Immunofluorescence Microscopy using ab6658. 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 immunohistochemistry to detect GFP. Secondary antibody: Fluorochrome conjugated Anti-goat IgG secondary antibody was used for detection 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.



Immunocytochemistry/ Immunofluorescence - Biotin
Anti-GFP antibody (ab6658)
Image courtesy of Efrat Shema by Abreview.

ab6658 staining GFP in rat brain cells infected with viruses containing GFP under a CMV promoter by Immunocytochemistry/ Immunofluorescence. Cells were fixed with formaldehyde, permeabilized using 0.2% Triton, blocked with 20% serum and then incubated with ab6658 at a 1:50 dilution for 20 hours at 25°C. The secondary used was an Alexa-Fluor 488 conjugated rabbit polyclonal, used at a 1/200 dilution.

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