abcam

ab183734

Anti-GFP antibody [EPR14104]

Anti-GFP antibody [EPR14104] (ab183734) is a rabbit monoclonal antibody detecting GFP in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 100 publications

See more GFP antibodies and assay kits

Chicken version of this clone also available as ab300643. Same clone, same staining pattern, different species antibody backbone.
Learn more about chimeric antibodies

Lab Essentials | Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR14104
Purification technique	Affinity purification Protein A
Specificity	On the basis of low sequence homology, ab183734 is predicted to show no or limited cross-reactivity to RFP and BFP. For the best results in IHC, please use ab183734 on Formalin/PFA-fixed paraffin-embedded sections with heat mediated antigen retrieval.
Dissociation constant	1.11×10^{-11} M

Concentration	0.12 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Tag
Dilution info	-
Notes	-

IHC-P

Tested

Species	Tag
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

WB

Tested

Species	Tag
Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Tag
Dilution info	1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Tag
Dilution info	1/50
Notes	-

Target data

See full target information GFP

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 Ca(2+)-activated photoprotein aequorin.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Anti-GFP antibody [EPR14104] (ab183734) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P and WB.

Abcam's high quality manufacturing and validation processes ensure Anti-GFP antibody [EPR14104] (ab183734) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

Anti-GFP antibody [EPR14104] (ab183734) has 24 independent reviews from customers.

GFP antibodies are often used as loading controls in Western Blot. Anti-GFP antibody [EPR14104] has been verified in

Western Blot samples and detects a band at 27kDa Molecular weight.

GFP antibodies are used to visualize proteins labelled with this tag in a variety of applications (for example imaging and Flow cytometry). To enable specific detection of your tagged protein, Anti-GFP antibody [EPR14104] (ab183734) has been validated in Flow Cyt (Intra), ICC/IF, IHC-P and WB.

Anti-GFP antibody [EPR14104] (ab183734) specifically detects GFP (UniProt ID: P42212; Molecular weight: 27kDa) and is sold in 100 µL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR14104 - ab220802.

Antibody clone EPR14104 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, APC, PE (ab225314, ab283597, ab303588).

Green Fluorescent Protein (GFP), originally derived from the jellyfish Aequorea victoria, emits a bright green fluorescence under ultraviolet or blue light. This unique property makes GFP an invaluable tool in molecular and cell biology research. Widely used to tag proteins, GFP allows scientists to visualize and track protein expression, localization and interactions within living cells. Key applications of GFP include fluorescence microscopy (ICC, IHC, IF), flow cytometry (FC) and western blotting (WB).

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

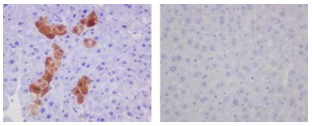
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

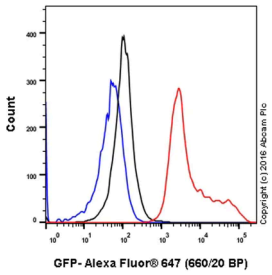
12 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GFP antibody

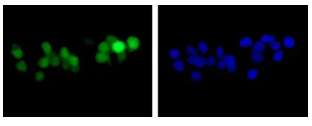
Immunohistochemical analysis of paraffin-embedded GFP transgenic mouse liver tissue (left) and normal mouse liver tissue (right) labeling GFP with unpurified ab183734 at 1/250 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-GFP antibody [EPR14104] (ab183734)

GFP Flow Cytometry (Intracellular) staining using rabbit Anti-GFP antibody

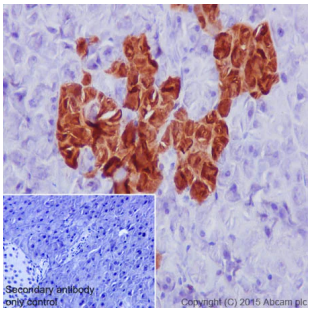
Intracellular Flow Cytometry analysis of 293T (human embryonic kidney) transfected with human TNFRSF9 cells labeling GFP with purified ab183734 at 1/50 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 647) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) was used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GFP antibody

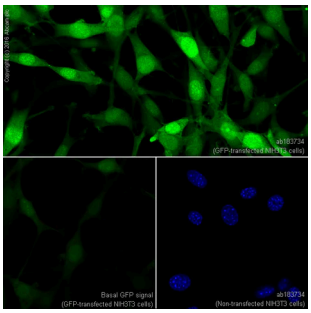
Immunofluorescent analysis of 4% paraformaldehyde-fixed GFP transfected 293 cells labeling GFP with unpurified ab183734 at 1/500 dilution, followed by Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody at 1/200 dilution (green). Counterstained with Dapi (blue)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GFP antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of GFP transgenic mouse pancreas tissue labelling GFP with purified ab183734 at a dilution of 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

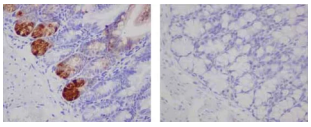


Immunocytochemistry/ Immunofluorescence - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GFP antibody

ab183734 staining GFP in GFP-transfected NIH3T3 cells. The cells were fixed with 4% formaldehyde (10min) and then blocked in 1% BSA / 0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with ab183734 at 1/500 dilution overnight at +4°C followed by incubation with ab150081, Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488), for 1 hour, at 1µg/ml.
Under identical experimental conditions, when compared to the basal level of GFP expression in transfected NIH3T3 cells, the cells upon which ab183734 was applied gave a stronger signal in the 488 channel, indicating that ab183734 is binding to GFP and therefore eliciting signal amplification.

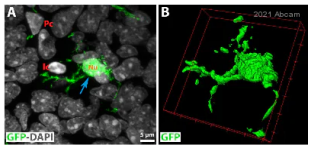
ab183734 was also applied to non-GFP-transfected NIH3T3 cells, which produced no positive staining, indicating specificity for GFP. Nuclear DNA was labelled with 1.43µM DAPI (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GFP antibody

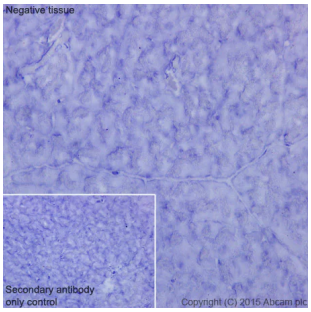
Immunohistochemical analysis of paraffin-embedded GFP transgenic mouse colon tissue (left) and normal mouse colon tissue (right) labeling GFP with unpurified ab183734 at 1/250 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



This image is courtesy of a customer review submitted by Estela Munoz

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFP antibody [EPR14104] (ab183734)

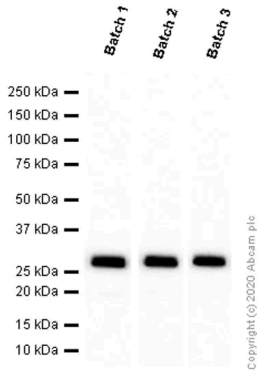
Immunohistochemistry analysis (Formalin/PFA-fixed paraffin-embedded sections) of paraformaldehyde fixed, mouse pineal gland tissue from an adult Cx3cr1-eGFP+/-; APP/PS1 mouse. Stained with ab183734 at 1/300 dilution. Secondary antibody used was Alexa Fluor® 647 donkey Anti-rabbit antibody at 1/1000 dilution. Cell nuclei were counterstained with DAPI (grey). Blocking was done with 3% BSA for 1 hour at 24°C. The sample was incubated with the primary antibody and PBS with 3% BSA and 1% Triton X-100 for 16 hours at 24°C. Antigen retrieval method was heat mediated 10 mM citrate buffer pH6



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFP antibody [EPR14104] (ab183734)

GFP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GFP antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse pancreas tissue (negative control) labelling GFP with purified ab183734 at a dilution of 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

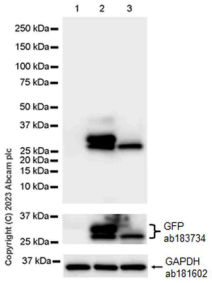


Western blot - Anti-GFP antibody [EPR14104] (ab183734)

GFP Western blot staining using rabbit Anti-GFP antibody

Different batches of ab183734 were tested on GFP transfected HEK-293 (Human embryonic kidney epithelial cell) lysate at 0.004 µg/ml. 15 µg of lysate was loaded in each lane. Bands observed at 27 kDa.
All lanes:
Western blot - Anti-GFP antibody [EPR14104] (ab183734)

Predicted band size: 27 kDa



Western blot - Anti-GFP antibody [EPR14104] (ab183734)

All lanes:
Western blot - Anti-GFP antibody [EPR28018-38] (ab314656) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) transfected with an empty vector containing a myc-His-tag®, whole cell lysate at 7 µg

Lane 2:
293T transfected with an empty vector containing an EGFP-myc-tag, whole cell lysate at 7 µg

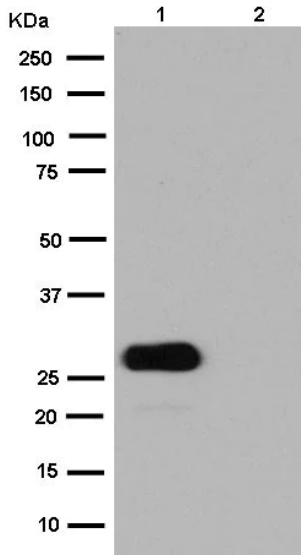
Lane 3:
293T transfected with an empty vector containing a GFP-tag, whole cell lysate at 7 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 26 kDa, 36 kDa

Exposure time: 3s



Western blot - Anti-GFP antibody [EPR14104] (ab183734)

All lanes:
Western blot - Anti-GFP antibody [EPR14104] (ab183734) at 1/10000 dilution

Lane 1:
GFP transfected 293 cell lysate at 10 µg

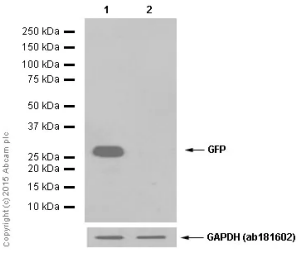
Lane 2:
Non-transfected 293 cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 27 kDa

Observed band size: 27 kDa



Western blot - Anti-GFP antibody [EPR14104] (ab183734)

Blocking and dilution buffer: 5% NFDM /TBST.
All lanes:
Western blot - Anti-GFP antibody [EPR14104] (ab183734) at 1/10000 dilution

Lane 1:
GFP transfected 293 cell lysate at 10 µg

Lane 2:
Non-transfected 293 cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 27 kDa

Observed band size: 25 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.