abcam

ab246502

Anti-Peripherin antibody [EPR23445-28]

Anti-Peripherin antibody [EPR23445-28] (ab246502) is a rabbit monoclonal antibody detecting Peripherin in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, IHC-Fr, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR23445-28
Purification technique	Affinity purification Protein A
Concentration	0.45 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/250
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Species	Rat
Dilution info	1/250
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Use at 1/10,000 dilution for mouse and rat. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Use at 1/10,000 dilution for mouse and rat. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Use at 1/10,000 dilution for mouse and rat. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information PRPH

Function	Class-III neuronal intermediate filament protein (By similarity). May form an independent structural network without the involvement of other neurofilaments or may cooperate with the neuronal intermediate filament proteins NEFL, NEFH, NEFM and INA to form a filamentous network (PubMed:15322088, PubMed:15446584). Assembly of the neuronal intermediate filaments may be regulated by RAB7A (By similarity). Plays a role in the development of unmyelinated sensory neurons (By similarity). May be involved in axon elongation and axon regeneration after injury (By similarity). Inhibits neurite extension in type II spiral ganglion neurons in the cochlea (By similarity).

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

What is this antibody validated in?
Anti-Peripherin antibody [EPR23445-28] (ab246502) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Peripherin?
Anti-Peripherin [EPR23445-28] (ab246502) specifically detects a band for Peripherin (UniProt: P41219) at a molecular weight of 54kDa.

Other related products
We have a range of other formats of antibody clone [EPR23445-28] also available for your convenience: ab246502, Carrier free - ab269861, Alexa Fluor® 488 - ab275150, Alexa Fluor® 647 - ab275151, PE - ab305976, APC - ab305977, HRP - ab305978, Alkaline Phosphatase - ab308666, Alexa Fluor® 555 - ab311892, Alexa Fluor® 568 - ab312363, Alexa Fluor® 750 - ab321492

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Peripherin also known as 8G2 or 7C5 is a protein expressed strongly in peripheral and certain central nervous system neurons. The mass of the peripherin protein is approximately 57 kDa. This intermediate filament protein structurally supports neurons aiding in their proper formation maintenance and regeneration. Peripherin localizes to the axons of mature neurons and serves important functions in the neuronal cytoskeleton and its stability.
Biological function summary	Peripherin impacts the nervous system's structure and dynamics. As part of the cytoskeleton it contributes to neurofilament networks which are essential for neuronal shape and mechanical integrity. Peripherin plays a role in neuronal differentiation and apoptosis. It operates independently but occasionally interacts with other cytoskeletal proteins like neurofilament light protein to perform its duties in neuronal cells.
Pathways	Peripherin is involved in processes associated with neuronal development and injury response. It features in neurogenesis pathways where it influences the growth and repair of axons. Peripherin interacts with proteins such as vimentin which helps manage cell dynamics and stress responses. The axonal transport pathway also utilizes peripherin to support axonal transport under stressful conditions ensuring cellular integrity and function.
Associated diseases and disorders	Peripherin connects strongly to neurodegenerative diseases such as amyotrophic lateral sclerosis (ALS) and spinal muscular atrophy (SMA). Its overexpression or aggregation can create abnormal filamentous structures that contribute to motor neuron degeneration. In ALS peripherin may interact with TAR DNA-binding protein 43 (TDP-43) and superoxide dismutase 1 (SOD1) proteins known to be significant in the disease pathogenesis. Understanding peripherin's role in these diseases aids in unraveling mechanisms underlying neuronal degeneration.

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.

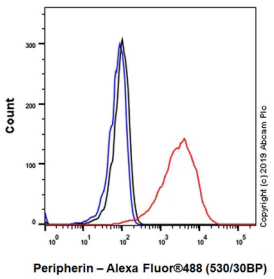
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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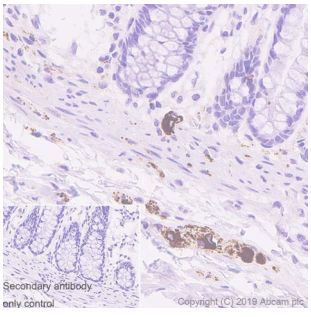
13 product images



Flow Cytometry (Intracellular) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized SH-SY5Y (human neuroblastoma epithelial cell) cells labelling Peripherin with ab246502 at 1/50 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

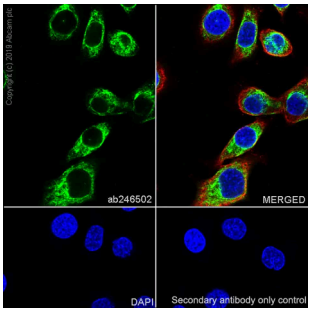


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

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

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Peripherin with ab246502 at 1/2000 dilution (0.227 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on the ganglion cells in human colon (PMID: 26469323). The section was incubated with ab246502 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

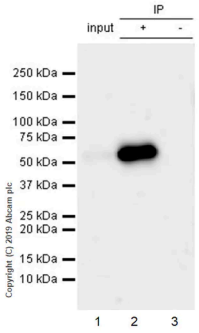
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Peripherin antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized SH-SY5Y (human neuroblastoma epithelial cell) cells labeling Peripherin with ab246502 at 1/100 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in SH-SY5Y cell line. Tubulin is detected using ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (Red). The nuclear counter stain is DAPI (Blue).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit at 1/1000 dilution.



Immunoprecipitation - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin was immunoprecipitated from 0.35 mg Human spinal cord lysate with ab246502 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab246502 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: Human spinal cord lysate 10ug

Lane 2: ab246502 IP in Human spinal cord lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab246502 in Human spinal cord lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

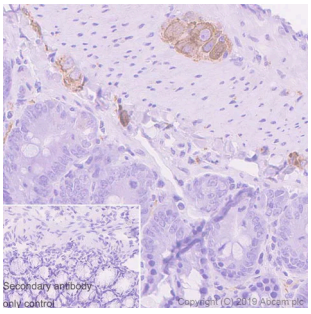
Exposure time: 40 seconds.

The 58KD isoform of peripherin observed is consistent with what has been described in the literature (PMID: 20587592, 18287500, 17475883).

All lanes:
Immunoprecipitation - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Predicted band size: 53 kDa

Observed band size: 58 kDa

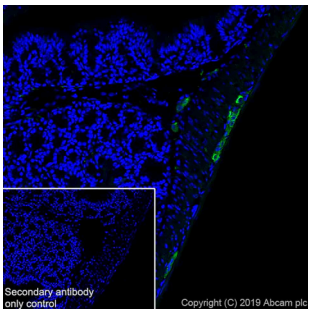


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

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

Immunohistochemical analysis of paraffin-embedded Rat colon tissue labeling Peripherin with ab246502 at 1/10,000 dilution (0.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on the ganglion cells in rat colon. The section was incubated with ab246502 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

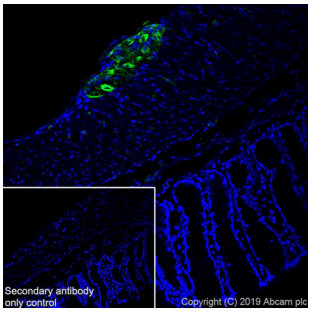


Immunohistochemistry (Frozen sections) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Immunohistochemistry (Frozen sections) staining using rabbit Anti-Peripherin antibody

Immunohistochemical analysis of frozen section of 4% PFA-fixed, 0.2% Triton X-100 permeabilized mouse colon tissue labeling Peripherin with ab246502 at 1/250 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). Positive staining on the ganglion cells in mouse colon is observed. The nuclear counter stain is DAPI (Blue).
Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

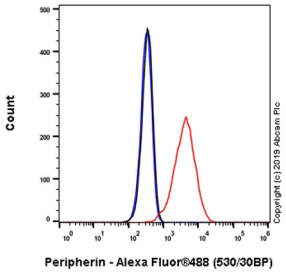


Immunohistochemistry (Frozen sections) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Immunohistochemistry (Frozen sections) staining using rabbit Anti-Peripherin antibody

Immunohistochemical analysis of frozen section of 4% PFA-fixed, 0.2% Triton X-100 permeabilized rat colon tissue labeling Peripherin with ab246502 at 1/250 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). Positive staining on the ganglion cells in rat colon is observed. The nuclear counter stain is DAPI (Blue).
Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

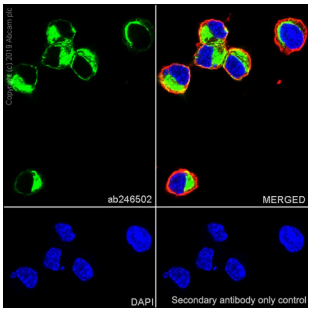
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

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

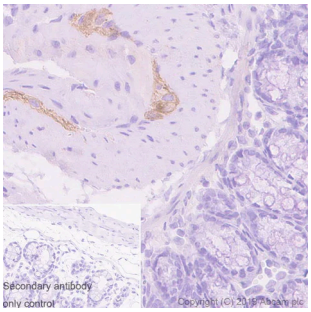
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling Peripherin with ab246502 at 1/50 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Peripherin antibody

Immunofluorescent analysis of4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labeling Peripherin with ab246502 at 1/100 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in Neuro-2a cell line. Tubulin is detected using ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (Red). The nuclear counter stain is DAPI (Blue).
Secondary antibody only control: Used PBS instead of primary antibody, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution.

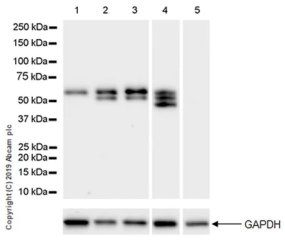


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Peripherin antibody [EPR23445-28] (ab246502)

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

Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labeling Peripherin with ab246502 at 1/10,000 dilution (0.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on the ganglion cells in mouse colon. The section was incubated with ab246502 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 37 seconds.

The 58KD, 56KD, and 45KD isoforms of peripherin observed are consistent with what has been described in the literature (PMID: 20587592, 18287500, 17475883).

Negative control: Kidney (PMID: 15132161).

All lanes:
Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502) at 1/1000 dilution

Lane 1:
Human spinal cord lysate at 20 µg

Lane 2:
Human lower limb nerve lysate at 20 µg

Lane 3:
Human nerve lysate at 20 µg

Lane 4:

SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 20 µg

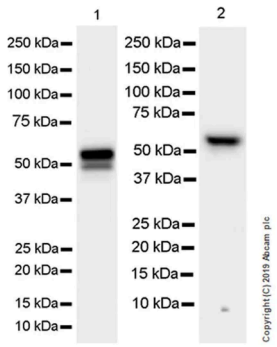
Lane 5:
Human kidney lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) or VeriBlot for IP secondary antibody (HRP) (ab131366) at 1/100000 dilution

Predicted band size: 53 kDa

Observed band size: 45 kDa, 56 kDa, 58 kDa



Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Western blot staining using rabbit Anti-Peripherin antibody

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 6 seconds.

The 58KD, 56KD and 45KD isoforms of peripherin observed are consistent with what has been described in the literature (PMID: 20587592, 18287500, 17475883).

All lanes:
Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502) at 1/1000 dilution

Lane 1:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

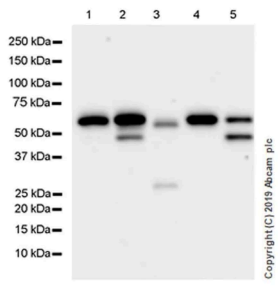
Lane 2:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Secondary

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

Predicted band size: 53 kDa

Observed band size: 45 kDa, 56 kDa, 58 kDa



Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502)

Peripherin Western blot staining using rabbit Anti-Peripherin antibody

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 26 seconds.

The 58KD, 56KD, 45KD and 28KD isoforms of peripherin observed are consistent with what has been described in the literature (PMID: 20587592,18287500,17475883).

All lanes:
Western blot - Anti-Peripherin antibody [EPR23445-28] (ab246502) at 1/1000 dilution

Lane 1:
Mouse dorsal ganglion lysate at 20 µg

Lane 2:
Rat dorsal ganglion lysate at 20 µg

Lane 3:
Mouse spinal cord lysate at 20 µg

Lane 4:
Rat spinal cord lysate at 20 µg

Lane 5:
Mouse sciatic nerve lysate at 20 µg

Secondary

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

Predicted band size: 53 kDa

Observed band size: 28 kDa, 45 kDa, 56 kDa, 58 kDa

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