abcam

ab216443

Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR1292
Purification technique	Affinity purification Protein A
Specificity	This product may cross react with the following family members: NGF beta, neurotrophin 3, neurotrophin 4. It was discovered that this antibody exhibited weak cross - reactivity with the NTF3 protein.
Concentration	1.01 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Heat up to 98 degrees C, below boiling, and then let cool for 10-20 min.

Not recommended

Species	Mouse, Rat, Transfected cell line - Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse, Rat, Human, Transfected cell line - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Transfected cell line - Human
Dilution info	-

Notes	-

IHC-Fr

Tested

Species	Human
Dilution info	-
Notes	-

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

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

Not recommended

Species	Transfected cell line - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell line - Human
Dilution info	-
Notes	-

Target data

See full target information BDNF

Function	Important signaling molecule that activates signaling cascades downstream of NTRK2 (PubMed:11152678). During development, promotes the survival and differentiation of selected neuronal populations of the peripheral and central nervous systems. Participates in axonal growth, pathfinding and in the modulation of dendritic growth and morphology. Major regulator of synaptic transmission and plasticity at adult synapses in many regions of the CNS. The versatility of BDNF is emphasized by its contribution to a range of adaptive neuronal responses including long-term potentiation (LTP), long-term depression (LTD), certain forms of short-term synaptic plasticity, as well as homeostatic regulation of intrinsic neuronal excitability. Neurotrophic factor BDNF precursor form. Important signaling molecule that activates signaling cascades downstream of NTRK2. Activates signaling cascades via the heterodimeric receptor formed by NGFR and SORCS2 (PubMed:24908487, PubMed:29909994). Signaling via NGFR and SORCS2 plays a role in synaptic plasticity and long-term depression (LTD). Binding to NGFR and SORCS2 promotes neuronal apoptosis. Promotes neuronal growth cone collapse (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab206035 is the carrier-free version of ab108319.

For BDNF, multiple WB bands are possible and expected. The human protein has 5 isoforms (precursors: 28 – 37 kDa) and can be glycosylated (Uniprot: P23560). The mature form is expected at ~14 kDa (monomer) and the dimer at ~28 kDa.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

What does low endotoxin mean?
Our low endotoxin, azide-free formats have low endotoxin level (1 EU/mg, determined by the TAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

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

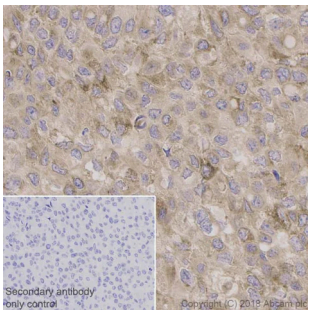
We do not recommend this combination. It is not covered by our product promise.

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.

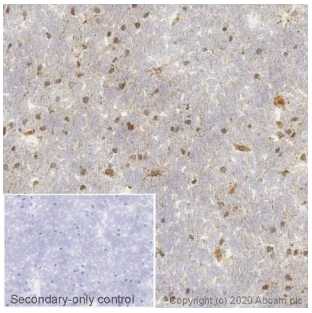
10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human bladder cancer tissue sections labeling BDNF with purified ab108319 at 1:500 dilution (0.56 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer pH 9.0). The secondary antibody used was Goat Anti-Rabbit IgG H&L (HRP polymer) ab214880.
This data was developed using the same antibody clone in a different buffer formulation containing PBS BSA glycerol and sodium azide (ab108319).

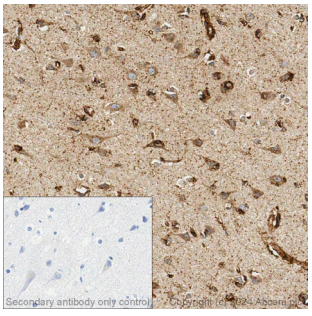


Immunohistochemistry (Frozen sections) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

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

This data was developed using the same antibody clone in a different buffer formulation (ab108319).
IHC image of BDNF staining in a section of frozen normal human cerebral cortex performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab108319, 1/200 dilution, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

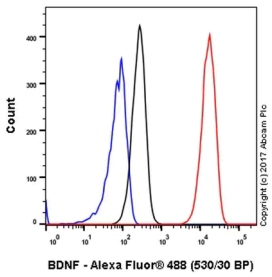


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

BDNF Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human brain (cerebrum) using rabbit Anti-BDNF antibody

This data was developed using the same antibody clone in a different buffer formulation (ab108319).

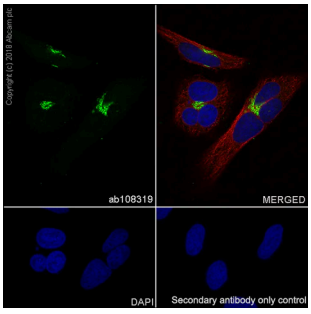
Immunohistochemical analysis of formalin fixed paraffin embedded human brain (cerebrum) labelling BDNF with ab108319 at a concentration of 0.56 µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with an OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was conducted for 32 mins at 100°C with ULTRA cell conditioning solution (CC1, pH 8.5). ab108319 Anti-BDNF antibody [EPR1292] was incubated at 37°C for 16 mins. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

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

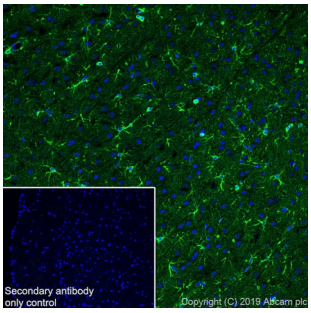
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling BDNF with purified ab108319 at 1/30 dilution (10 µg/ml) (red). Cells were fixed with 80% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108319).



Immunocytochemistry/ Immunofluorescence - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

BDNF Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-BDNF antibody

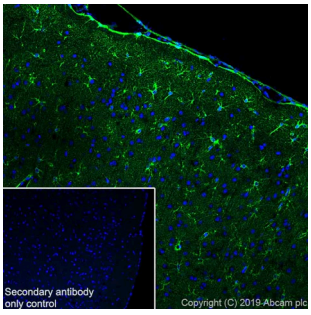
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling BDNF with Purified ab108319 at 1:500 (0.6 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488 ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS BSA glycerol and sodium azide (ab108319).



Immunohistochemistry (Frozen sections) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

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

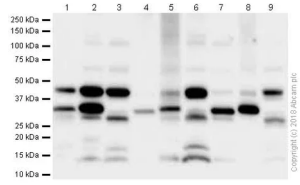
Immunohistochemistry (Frozen sections) analysis of rat cerebral cortex tissue sections labeling BDNF with Purified ab108319 at 1/100 (2.8 µg/ml).Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. DAPI was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108319).



Immunohistochemistry (Frozen sections) - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

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

Immunohistochemistry (Frozen sections) analysis of mouse cerebrum tissue sections labeling BDNF with Purified ab108319 at 1/100 (2.8 µg/ml).Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. DAPI was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108319).



Western blot - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

BDNF Western blot staining using rabbit Anti-BDNF antibody

This data was developed using ab108319, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-BDNF antibody [EPR1292] (ab108319) at 1/1000 dilution

Lane 1:
Human brain lysates at 20 µg

Lane 2:
Mouse brain lysates at 20 µg

Lane 3:
Rat brain lysates at 20 µg

Lane 4:
Human hippocampus lysates at 20 µg

Lane 5:
Mouse hippocampus lysates at 20 µg

Lane 6:
Rat hippocampus lysates at 20 µg

Lane 7:
Human cerebellum lysates at 20 µg

Lane 8:
Mouse cerebellum lysates at 20 µg

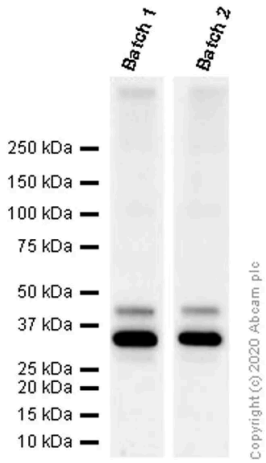
Lane 9:
Rat cerebellum lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 27 kDa

Observed band size: 15-45 kDa

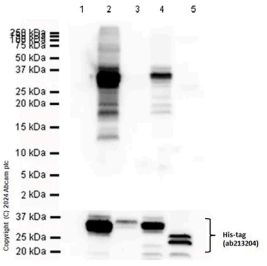


Western blot - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

BDNF Western blot staining using rabbit Anti-BDNF antibody

This data was developed using ab108319, the same antibody clone in a different buffer formulation. Different batches of ab108319 were tested on Mouse brain lysate at 0.3 µg/ml. 15 µg of lysate was loaded in each lane. Bands observed at 14-45 kDa.
All lanes:
Western blot - Anti-BDNF antibody [EPR1292] (ab108319)

Predicted band size: 27 kDa



Western blot - Anti-BDNF antibody [EPR1292] - Low endotoxin, Azide free (ab216443)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108319).
Blocking and diluting buffer and concentration: 5% NFDM/TBST

ab213204 was used as a His tag loading control.

All lanes:
Western blot - Anti-BDNF antibody [EPR1292] (ab108319) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containing a His tag whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a Human BDNF expression vector containing a His-tag whole cell lysate at 20 µg

Lane 3:
293T cells transfected with a Human NGF expression vector containing a His-tag whole cell lysate at 20 µg

Lane 4:
293T cells transfected with a Human NTF3 expression vector containing a His-tag whole cell lysate at 20 µg

Lane 5:
293T cells transfected with a Human NTF4 expression vector containing a His-tag whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 35 kDa

Exposure time: 1s

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