**Product datasheet**

**Anti-BDNF antibody [EPR1292] ab108319**

<table>
<thead>
<tr>
<th>Overview</th>
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<tbody>
<tr>
<td><strong>Product name</strong></td>
<td>Anti-BDNF antibody [EPR1292]</td>
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<tr>
<td><strong>Description</strong></td>
<td>Rabbit monoclonal [EPR1292] to BDNF</td>
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<td><strong>Host species</strong></td>
<td>Rabbit</td>
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<td><strong>Specificity</strong></td>
<td>This product may cross react with the following family members: NGF beta, neurotrophin 3, neurotrophin 4. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.</td>
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<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: Flow Cyt, WB, IHC-P, ICC/IF</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human</td>
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<td><strong>Immunogen</strong></td>
<td>Synthetic peptide within Human BDNF aa 150 to the C-terminus. The exact sequence is proprietary. Database link: <a href="http://www.uniprot.org/uniprot/P23560">P23560</a> (Peptide available as <a href="http://www.abcam.com/ab182199">ab182199</a>)</td>
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<tr>
<td><strong>Positive control</strong></td>
<td>WB: Human, rat and mouse brain, hippocampus and cerebellum lysates. IHC-P: Human brain and bladder cancer tissues; Coronal sections from fetal (SNC) and post-natal (VTA) WT and Rgs6-/- mice.. ICC/IF: HeLa cells. Flow Cyt: HeLa cells.</td>
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<td><strong>General notes</strong></td>
<td>For BDNF, multiple WB bands are possible and expected. The human protein has 5 isoforms (precursors: 28 – 37 kDa) and can be glycosylated (Uniprot: <a href="http://www.uniprot.org/uniprot/P23560">http://www.uniprot.org/uniprot/P23560</a>). The mature form is expected at ~14 kDa (monomer) and the dimer at ~28 kDa. Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team. This product is a recombinant rabbit monoclonal antibody.</td>
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**Properties**
Form: Liquid


Storage buffer: pH: 7.20
Preservative: 0.01% Sodium azide
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity: Protein A purified

Clonality: Monoclonal

Clone number: EPR1292

Isotype: IgG

Purity: Protein A purified

Clonality: Monoclonal

Clone number: EPR1292

Isotype: IgG

Function: 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.

Tissue specificity: Brain. Highly expressed in hippocampus, amygdala, cerebral cortex and cerebellum. Also expressed in heart, lung, skeletal muscle, testis, prostate and placenta.
<table>
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<tr>
<th>Involvement in disease</th>
<th>Bulimia nervosa 2</th>
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<tbody>
<tr>
<td></td>
<td>Congenital central hypoventilation syndrome</td>
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<td><strong>Sequence similarities</strong></td>
<td>Belongs to the NGF-beta family.</td>
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<td><strong>Post-translational modifications</strong></td>
<td>The propeptide is N-glycosylated and glycosulfated.</td>
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<td><strong>Cellular localization</strong></td>
<td>Secreted.</td>
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**Images**

Co-immunofluorescence staining against tyrosine hydroxylase (TH; green), nuclear Dapi (blue) and BDNF (red, ab108319) in coronal sections from fetal (SNC) and post-natal (VTA) WT and Rgs6−/− mice. Scale bar 20 µm.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BDNF antibody [EPR1292] (ab108319)

Image from Bifsha P et al, PLoS Genet, 11(10), Fig 7C. doi: 10.1371/journal.pgen.1004863.
**Western blot - Anti-BDNF antibody [EPR1292] (ab108319)**

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

**Lane 1:** Human hippocampus lysate  
**Lane 2:** Rat hippocampus lysate  
**Lane 3:** Mouse hippocampus lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes:** Gt anti Rb IR680 at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 15 kDa  
**Additional bands at:** 15 kDa (possible mature (processed) protein), 28 kDa (possible multimer), 35 kDa, 45 kDa (possible immature (unprocessed)). We are unsure as to the identity of these extra bands.

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using Licor blocking buffer before being incubated with unpurified ab108319 (1/1000) overnight at 4°C. Ab8245 (mouse anti-GAPDH; 0.05 µg/mL) was included as a loading control. Antibody binding was detected using goat anti-rabbit IgG IR-680 (green) and goat anti-mouse IgG IR800 (red) at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
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)

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.
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).
Western blot - Anti-BDNF antibody [EPR1292] (ab108319)

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

- **Lane 1**: Human brain lysates with 5% NFDM/TBST
- **Lane 2**: Mouse brain lysates with 5% NFDM/TBST
- **Lane 3**: Rat brain lysates with 5% NFDM/TBST
- **Lane 4**: Human hippocampus lysates with 5% NFDM/TBST
- **Lane 5**: Mouse hippocampus lysates with 5% NFDM/TBST
- **Lane 6**: Rat hippocampus lysates with 5% NFDM/TBST
- **Lane 7**: Human cerebellum lysates with 5% NFDM/TBST
- **Lane 8**: Mouse cerebellum lysates with 5% NFDM/TBST
- **Lane 9**: Rat cerebellum lysates with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

**Secondary**

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

**Predicted band size**: 15 kDa

**Observed band size**: 15-45 kDa
Immunohistochemical analysis of paraffin-embedded human brain tissue using unpurified ab108319 at 1/100 dilution.

Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma) cells labelling BDNF with unpurified ab108319 at a dilution of 1/750. Cells were fixed with paraformaldehyde and permeabilized with 0.5% Triton-X100 in PBS. ab150081 (1/200) was used as the secondary antibody.

The antibody produces a strong, golgi-associated labelling pattern in both PF and MeOH fixed samples.

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