



## Product datasheet

# Anti-BDNF antibody [3C11] ab203573

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### Overview

<b>Product name</b>	Anti-BDNF antibody [3C11]
<b>Description</b>	Mouse monoclonal [3C11] to BDNF
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human, Chinese hamster
<b>Immunogen</b>	Recombinant full length protein corresponding to Human BDNF aa 100 to the C-terminus. Full length mature form without signal peptide or propeptide. Produced in E coli. Database link: <a href="#">P23560</a>
	 <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	Recombinant human BDNF; CHO supernatant containing BDNF; Rat hippocampal neuron culture lysate; proBDNF-expressing U2OS cells, brain tissue lysate. IHC-P: FFPE Human Hippocampus Normal
<b>General notes</b>	<p>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.</p> <p>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.</p> <p>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&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.1% Sodium azide Constituent: 99% PBS

<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	3C11
<b>Isotype</b>	IgG1

## Applications

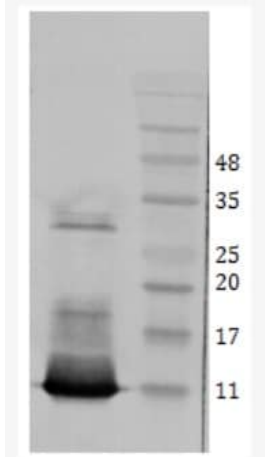
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab203573 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>IHC-P</b>		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>WB</b>		Use a concentration of 0.2 - 2 µg/ml. Predicted molecular weight: 15 kDa.
<b>ICC/IF</b>		Use a concentration of 2 - 20 µg/ml.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Brain. Highly expressed in hippocampus, amygdala, cerebral cortex and cerebellum. Also expressed in heart, lung, skeletal muscle, testis, prostate and placenta.
<b>Involvement in disease</b>	Bulimia nervosa 2 Congenital central hypoventilation syndrome
<b>Sequence similarities</b>	Belongs to the NGF-beta family.
<b>Post-translational modifications</b>	The propeptide is N-glycosylated and glycosulfated. Converted into mature BDNF by plasmin (PLG).
<b>Cellular localization</b>	Secreted.

## Images



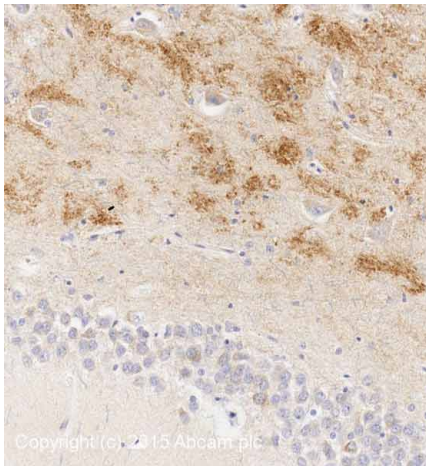
Western blot - Anti-BDNF antibody [3C11]  
(ab203573)

Anti-BDNF antibody [3C11] (ab203573) at 5  $\mu\text{g/ml}$  + CHO supernatant containing BDNF at 10  $\mu\text{l}$

**Secondary**

HRP-conjugated goat anti-mouse

**Predicted band size:** 15 kDa

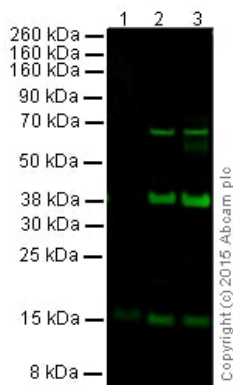


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BDNF antibody [3C11]  
(ab203573)

IHC image of BDNF staining in Normal Human Hippocampus formalin fixed paraffin embedded tissue section\*, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab203573, 5 $\mu\text{g/ml}$ , 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.

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.

\*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Western blot - Anti-BDNF antibody [3C11]  
(ab203573)

**All lanes :** Anti-BDNF antibody [3C11] (ab203573) at 5 µg/ml

**Lane 1 :** Human hippocampus

**Lane 2 :** Rat hippocampus

**Lane 3 :** Mouse hippocampus

Lysates/proteins at 20 µg per lane.

#### **Secondary**

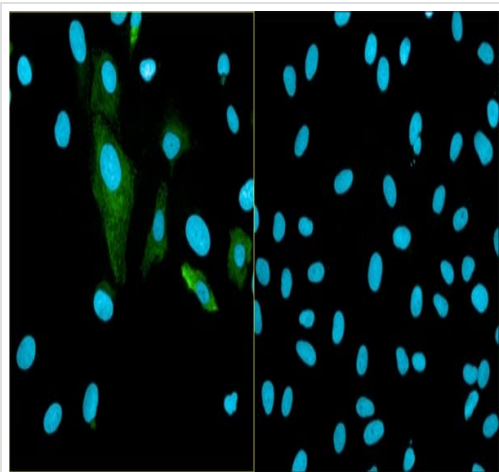
**All lanes :** goat anti-mouse IgG IR-680 (green) at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 15 kDa

**Additional bands at:** 15 kDa (possible mature (processed) protein), 40 kDa (possible immature (unprocessed))

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 ab203573 (1/1000) overnight at 4°C. Antibody binding was detected using goat anti-mouse IgG IR-680 (green) at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx



Immunocytochemistry/ Immunofluorescence - Anti-BDNF antibody [3C11] (ab203573)

Immunofluorescent analysis of proBDNF expressing U2OS cells labeling BDNF with ab203573 at 10 µg/mL (Left hand panel). Goat anti-mouse AlexaFluor488 was used as secondary antibody. For nuclear staining DAPI was used. Right hand panel: Negative control (non-transfected U2OS cells).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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