

Product datasheet

Anti-BDNF antibody ab46176

★★★★☆ 3 Abreviews 9 References 2 Images

Overview

Product name	Anti-BDNF antibody
Description	Rabbit polyclonal to BDNF
Specificity	The antibody is specific to recombinant BDNF protein and when used in rat brains extracts detects a 28kDa proBDNF band and in some tissues will also recognise the mature BDNF homodimer. This antibody shows no cross-reactivity with NGF, NT3 and NT4/5 using Western blot analysis.
Tested applications	Suitable for: WB, ELISA, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	A peptide from the N-terminal region of mature mouse BDNF conjugated to a carrier protein to enhance immunological response.
Positive control	Rat brain This antibody gave a positive result when used in the following formaldehyde fixed cell line: SKNSH.
General notes	This antibody recognizes both the mature BDNF and unprocessed precursor (proBDNF). BDNF is only seen as a 14 kDa band when it is run under reducing conditions. When a native gel is used, the dimeric form of BDNF is seen as a 28 kDa band. For BDNF, multiple WB bands are possible and expected. The human protein has 5 isoforms (precursors: 28 – 37 kDa) and can be glycosylated (Uniprot: http://www.uniprot.org/uniprot/P23560). The mature form is expected at ~14 kDa (monomer) and the dimer at ~28 kDa.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	Preservative: None Constituents: Whole serum
Purity	Whole antiserum
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab46176** 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
WB	★★★★★	1/1000. Detects a band of approximately 28 kDa (predicted molecular weight: 28 kDa).
ELISA		1/10000.
ICC/IF		1/200.

Target

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.

Involvement in disease

Bulimia nervosa 2
Congenital central hypoventilation syndrome

Sequence similarities

Belongs to the NGF-beta family.

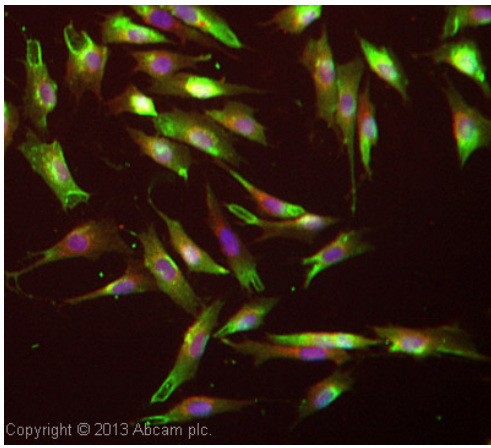
Post-translational modifications

The propeptide is N-glycosylated and glycosulfated.
Converted into mature BDNF by plasmin (PLG).

Cellular localization

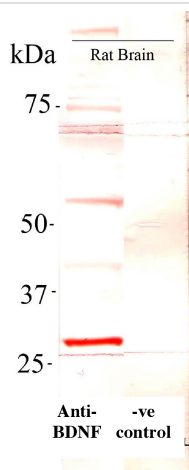
Secreted.

Images



Immunocytochemistry/ Immunofluorescence - Anti-BDNF antibody (ab46176)

ICC/IF image of ab46176 stained SKNSH cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab46176 at 1/200 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 Goat anti-Rabbit IgG (H+L) (ab96899) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Western blot - Anti-BDNF antibody (ab46176)

All lanes : Anti-BDNF antibody (ab46176) at 1/1000 dilution

Lane 1 : Rat Brain at 10 µl

Lane 2 : negative control

Predicted band size : 28 kDa

Observed band size : 28 kDa

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