

Product datasheet

Anti-BDNF antibody ab75040

★★★★☆ 5 Abreviews 6 References 3 Images

Overview

Product name	Anti-BDNF antibody
Description	Sheep polyclonal to BDNF
Host species	Sheep
Tested applications	Suitable for: IHC-FoFr, WB, IHC-P, IHC-Fr, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human, Xenopus laevis Predicted to work with: Zebrafish
Immunogen	A synthetic peptide from human mature BDNF conjugated to an immunogenic carrier protein.
General notes	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). Add glycerol to a final volume of 50% for extra stability and aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: None Constituents: PBS
Purity	IgG fraction
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab75040** in the following tested applications.

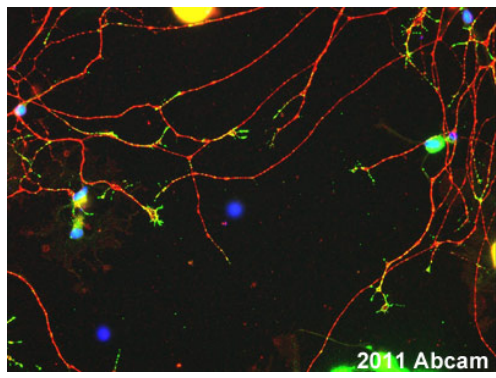
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-FoFr	★★★★★	1/100.
WB	★★★★☆	Use a concentration of 10 - 50 µg/ml. Predicted molecular weight: 14 , 28 kDa. This antibody has been tested in Western blot against the recombinant peptide used as an immunogen. We have no data on detection of endogenous protein.
IHC-P		Use a concentration of 10 - 50 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
IHC-Fr	★★★★☆	Use a concentration of 10 - 50 µg/ml.
ICC/IF	★★★★★	1/100.

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.

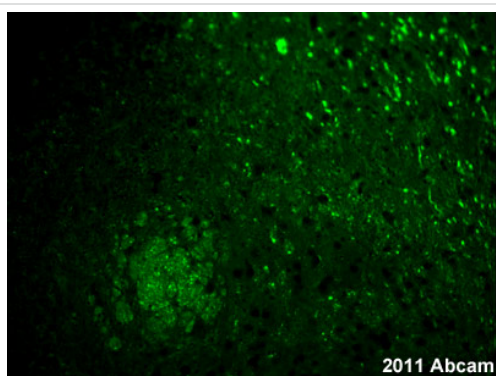
Images



Immunocytochemistry/ Immunofluorescence - Anti-BDNF antibody (ab75040)

This image is courtesy of an Abreview submitted by Ruma Raha-Chowdhury

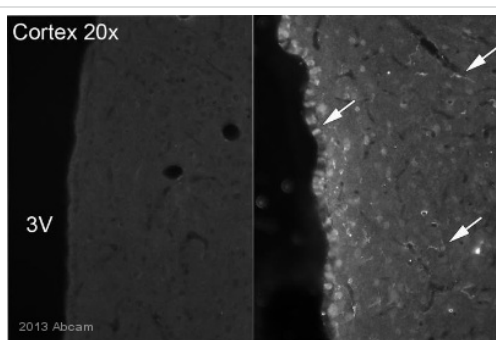
ab75040 staining cultured rat DRG neurons by ICC/IF. The cultured neurons were fixed with formaldehyde and blocked with 10% donkey serum for 1 hour at 24°C. The cultured neurons were then stained with ab75040 at 1/100 in 0.3% TritonX with 0.1x PBS and 10% donkey serum for 24h at 4°C. An Alexa Fluoro 488 donkey anti-sheep polyclonal antibody at 1/1000 was used as the secondary antibody. Beta II tubulin (which stains the axons) can be observed in red (Alexa fluoro 568 secondary). BDNF is observable in the DRG neuron's growth cones.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BDNF antibody (ab75040)

This image is courtesy of an Abreview submitted by Ruma Raha-Chowdhury

ab75040 staining human brain (striatum) sections by IHC-FrFl. The tissue sections were stained with ab75040 at a 1/100 dilution in 0.3% TritonX with 0.1x PBS and 10% donkey serum for 1h at 24°C. A donkey anti-rabbit Alexa488 polyclonal antibody at 1/1000 was used as the secondary antibody. BDNF expression can be observed in neuronal cell bodies and in processes.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-BDNF antibody (ab75040)

Karine Thibault, King's College London, United Kingdom

IHC-FoFr image of BDNF staining on rat cortex sections using ab75040 (1:100). The image shows sections incubated with ab75040(right) and without ab75040 (left). The tissues were fixed (animals perfused fixed) with 4% PFA and later postfixed overnight in the same fixative. They were cryoprotected in 30% sucrose and cut using a cryostat.

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