



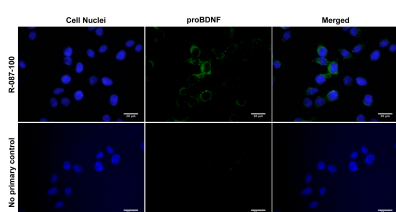
## Rabbit antibody to proBDNF (69-82): whole serum

<b>Catalogue No.:</b>	R-087-100
<b>Description:</b>	BDNF belongs to the neurotrophin family and regulates the survival and differentiation of neurons during development. The alterations in BDNF expression induced by various kinds of brain insult including stress, ischemia, seizure activity and hypoglycemia, may contribute to some pathologies such as depression, epilepsy, Alzheimer's, and Parkinson's disease. Microglia release BDNF that may contribute to neuroinflammation and neuropathic pain. <b>FUNCTION:</b> Promotes the survival of neuronal populations that are all located either in the central nervous system or directly connected to it. 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>SUBUNIT:</b> Monomers and homodimers. Binds to NTRK2/TRKB. <b>SUBCELLULAR LOCATION:</b> Secreted protein. <b>Post Translation Modification (PTM):</b> The propeptide is N-glycosylated and glycosulfated. <b>PTM:</b> Converted into mature BDNF by plasmin (PLG) (By similarity). <b>DISEASE:</b> Defects in BDNF are a cause of congenital central hypoventilation syndrome (CCHS); also known as congenital failure of autonomic control or Ondine curse. CCHS is a rare disorder characterized by abnormal control of respiration in the absence of neuromuscular or lung disease, or an identifiable brain stem lesion. A deficiency in autonomic control of respiration results in inadequate or negligible ventilatory and arousal responses to hypercapnia and hypoxemia. CCHS is frequently complicated with neurocristopathies such as Hirschsprung disease that occurs in about 16% of CCHS cases. <b>SIMILARITY:</b> Belongs to the NGF-beta family.
<b>Batch No.:</b>	See product label
<b>Unit size:</b>	100 uL
<b>Antigen:</b>	A synthetic peptide (C-ELLDEDQKVRPNEE) as a part of human BDNF precursor protein (aa: 69-82) conjugated to KLH has been used as the immunogen.
<b>Other Names:</b>	Brain-derived neurotrophic factor (Precursor); Abrineurin
<b>Accession:</b>	BDNF_HUMAN
<b>Produced in:</b>	Rabbit
<b>Purity:</b>	Whole serum
<b>Applications:</b>	IHC, WB. A dilution of 1:1000 to 1:5000 is recommended for both applications. ICC: 1:500 to 1:2000, antibody works on 4% formaldehyde fixed cells. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
<b>Comments:</b>	Ready-to-use reagents for in-vitro laboratory research use only.
<b>Specificity:</b>	Used in western blot, this antiserum detects a 35 kDa band corresponding to the molecular weight of proBDNF. No cross reactivity with other proneurotrophins was detected.
<b>Cross-reactivity:</b>	This antiserum is known to react with human, mouse and rat proBDNF and also expected to recognise other mammalian proBDNF.
<b>Form:</b>	Lyophilised

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- Reconstitution:** Reconstitute in 100  $\mu$ L of sterile water. Centrifuge to remove any insoluble material.
- Storage:** After reconstitution keep aliquots at -20C for a higher stability, and at 2-8C with an appropriate antibacterial agent. Glycerol (1:1) may be added for an additional stability. Avoid repetitive freeze/thaw cycles.
- Expiry Date:** 12 months after purchase
- References:**
1. A Acheson et al (1995) Nat. 74: 450-3
  2. Q Yan et al (1994) J. Neurosci. 14(9): 5281-91
  3. XF Zhou et al (1996) Neurosci. 74: 945-53
  4. XF Zhou, et al (1998) Exp. Neurol. 149: 237-42
  5. B Mellstrom et al (2004) Crit Rev Neurobiol 16, 43-9
  6. I Tapia-Arancibia et al (2004) Front Neuroendocrinol 25, 77-107
  7. S Pezet, et al (2002) Brain Res Brain Res Rev 40, 240-9
  8. Barde Y. A. et al (1989) EMBO J. 1: 549
  9. Conner J et al. (1997) J. Neurosci. 17: 2295
  10. L Ulman, et al (2008) J Neurosci. 2008 Oct 29;28(44):11263-8.



Immunofluorescence analysis of proBDNF expression in human SHSY-5Y cells. Fixed (4% formaldehyde), permeabilized, and blocked (10% normal horse serum, 0.1% Triton X100) SHSY-5Y cells were incubated with proBDNF antibody R-087-100 (1:1000, green) for 1 hour. Primary antibody binding was visualized with a secondary donkey anti-rabbit-CF488A antibody (4  $\mu$ g/mL, 1 hour incubation). Cell nuclei were stained with Hoechst dye (blue). BDNF-IR is observed in the perinuclear cytoplasm. Magnification: 100x.

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