

BDNF Rabbit pAb

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Catalog # AP52169

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P23560
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	27818
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BDNF
Epitope Specificity	151-247/247
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted.
DISEASE	Defects in BDNF are a cause of congenital central hypoventilation syndrome (CCHS) [MIM:209880]; 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Neurotrophins function to regulate naturally occurring cell death of neurons during development. The prototype neurotrophin is nerve growth factor (NGF), originally discovered in the 1950s as a soluble peptide promoting the survival of, and neurite outgrowth from, sympathetic ganglia. More recently, three additional structurally homologous neurotrophic factors have been identified. These include brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3) and neurotrophin-4 (NT-4), also designated NT-5. These various neurotrophins stimulate the in vitro survival of distinct but partially overlapping populations of neurons. The Trk A receptor is the preferential receptor for NGF, but also binds NT-3 and NT-4. The Trk B receptor binds equally well to both BDNF and NT-4 and to a lesser extent NT-3, while the Trk C receptor only binds NT-3. BDNF promotes the survival of neuronal populations that are all located either in the central nervous system or directly connected to it. Belongs to the NGF-beta family.

Additional Information

Gene ID	627
Other Names	Neurotrophic factor BDNF precursor form, proBDNF, Abrineurin, Brain-derived neurotrophic factor, Neurotrophic factor BDNF, BDNF {ECO:0000303 PubMed:28397838, ECO:0000312 HGNC:HGNC:1033}
Dilution	WB=1:500-2000,IHC-P=1:50-200,IHC-F=1:50-200,IF=1:50-200,Flow-Cyt=1:100-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	BDNF {ECO:0000303 PubMed:28397838, ECO:0000312 HGNC:HGNC:1033}
Function	Important signaling molecule that activates signaling cascades downstream of NTRK2 (PubMed: 11152678). 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.
Cellular Location	Secreted
Tissue Location	Detected in blood plasma and in saliva (at protein level) (PubMed:11152678, PubMed:19467646). Brain. Highly expressed in hippocampus, amygdala, cerebral cortex and cerebellum. Also expressed in heart, lung, skeletal muscle, testis, prostate and placenta

Background

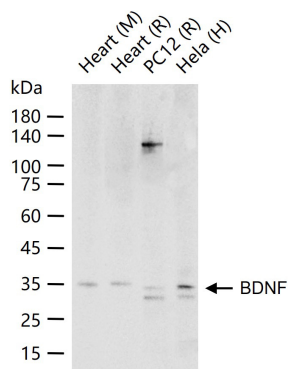
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References

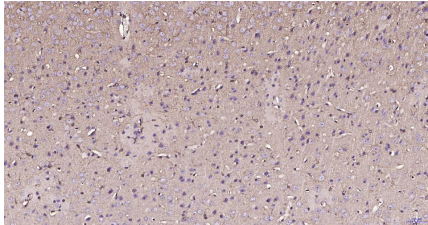
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Images

25 ug total protein per lane of various lysates (see on figure) probed with BDNF polyclonal antibody, unconjugated (AP52169) at 1:1000 dilution and 4°C



overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with BDNF Polyclonal Antibody, Unconjugated (AP52169) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.