BDNF Human/Murine/Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	BDNF, Recombinant Protein
Full Product Name	Human/Murine/Rat BDNF (Animal Free)
Product Gene Name	BDNF recombinant protein
Product Synonym Names	BDNF
Sequence	MHSDPARRGE LSVCDSISEW VTAADKKTAV DMSGGTVTVL EKVPVSKGQL KQYFYETKCN PMGYTKEGCR GIDKRHWNSQ CRTTQSYVRA LTMDSKKRIG WRFIRIDTSC VCTLTIKRGR
Host	E coli
Form/Format	lyophilized
Purity/Purification	>= 98% by SDS-PAGE gel and HPLC analyses.
Molecular Weight	27.0kDa
OMIM	phenotype 610269
3D Structure	ModBase 3D Structure for P23560
Species	Human/Murine/Rat
Species Reactivity/Cross reactivity	Chicken, Frog, Guinea Pig, Hamster, Monkey, Mouse, Rat, Human, Tadpole
Endotoxin level	<0.01 ng/Ug of protein (<0.1EU/Ug)
Biological Activity	Determined by its ability to bind recombinant human TrkB Fc Chimera in a functional ELISA.
Chromosomal Location	11p13
Product Categories/Family for BDNF recombinant protein	Cytokines & Growth Factors
ISO Certification	Manufactured in an ISO 9001:2008 Certified Laboratory.
Related Product Information for BDNF recombinant protein	MBS692868 is a recombinant protein targeting BDNF. Also known as Human/Murine/Rat BDNF (Animal Free). Host: E coli.
Other Notes	Small volumes of BDNF recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BDNF. It may not necessarily be applicable to this product.

NCBI GeneID	627
NCBI Accession #	NP_733931.1
NCBI Related Accession #	NM_170735.5
UniProt Primary Accession #	P23560
UniProt Protein Name	Brain-derived neurotrophic factor
UniProt Synonym Protein Names	Abrineurin

Protein Family	Brain-derived neurotrophic factor
UniProt Gene Name	BDNF
UniProt Synonym Gene Names	BDNF
UniProt Entry Name	BDNF_HUMAN
UniProt Comments for BDNF	BDNF: 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. 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. Belongs to the NGF-beta family. 5 isoforms of the human protein are produced by alternative promoter. Protein type: Secreted, signal peptide; Cytokine; Cell development/differentiation; Secreted Chromosomal Location of Human Ortholog: 11p13 Cellular Component: extracellular space; synaptic vesicle; mitochondrial crista; perinuclear region of cytoplasm; cytoplasmic membrane-bound vesicle; cytoplasm; dendrite; extracellular region; terminal button; perikaryon Molecular Function: growth factor activity; neurotrophin TRKB receptor binding Biological Process: circadian rhythm; axon guidance; mechanoreceptor differentiation; behavioral fear response; mitochondrial electron transport, NADH to ubiquinone; regulation of neuron differentiation; axon extension; response to hormone stimulus; positive regulation of long-term neuronal synaptic plasticity; response to vitamin A; negative regulation of neuroblast proliferation; ureteric bud development; dendrite development; regulation of retinal cell programmed cell death; feeding behavior; negative regulation of neuron apoptosis; response to electrical stimulus; negative regulation of synaptic transmission, GABAergic; inner ear development; response to food; nervous system development; chronic inflammatory response; response to light intensity; neuron recognition; learning; regulation of short-term neuronal synaptic plasticity; regulation of axon extension; negative regulation of striated muscle development; positive regulation of peptidyl-serine phosphorylation; positive regulation of synaptogenesis; axon target recognition; response to hyperoxia; glutamate secretion; response to hypoxia; response to fluoxetine; nerve development; response to activity; regulation of excitatory postsynaptic membrane potential; positive regulation of neuron differentiation; neurite morphogenesis; transmembrane receptor protein tyrosine kinase signaling pathway; gamma-aminobutyric acid signaling pathway Disease: Bulimia Nervosa, Susceptibility To, 1; Obsessive-compulsive Disorder; Bulimia Nervosa, Susceptibility To, 2; Central Hypoventilation Syndrome, Congenital
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