

DESCRIPTION

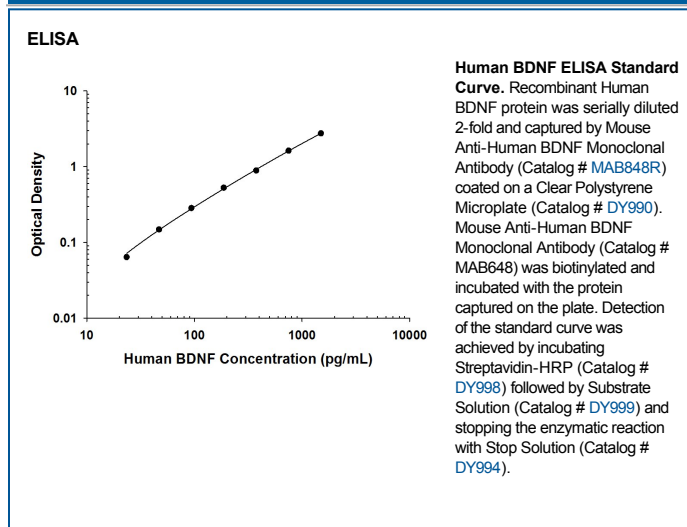
Species Reactivity	Human
Specificity	Detects human BDNF in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) NT-3 or rhNT-4.
Source	Monoclonal Mouse IgG _{2A} Clone # 37141
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human BDNF Arg128-Arg247 Accession # P23560
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human BDNF (Catalog # 248-BD). Please note: Human BDNF (clone 35928) (Catalog # MAB248) is preferred for this application.
ELISA		This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human BDNF Monoclonal Antibody (Catalog # MAB848R). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human/Mouse BDNF DuoSet ELISA Kit (Catalog # DY248) for convenient development of a sandwich ELISA.</i>

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Brain-derived neurotrophic factor (BDNF) is a member of the NGF family of neurotrophic factors (also named neurotrophins) that are required for the differentiation and survival of specific neuronal subpopulations in both the central as well as the peripheral nervous system. The neurotrophin family is comprised of at least four proteins including NGF, BDNF, NT-3, and NT-4/5. These secreted cytokines are synthesized as prepropeptides that are proteolytically processed to generate the mature proteins. All neurotrophins have six conserved cysteine residues that are involved in the formation of three disulfide bonds and all share approximately 55% sequence identity at the amino acid level. Similarly to NGF, bioactive BDNF is predicted to be a non-covalently linked homodimer.

BDNF cDNA encodes a 247 amino acid residue precursor protein with a signal peptide and a proprotein that are cleaved to yield the 119 amino acid residue mature BDNF. The amino acid sequence of mature BDNF is identical in all mammals examined. High levels of expression of BDNF have been detected in the hippocampus, cerebellum, fetal eye and placenta. In addition, low levels of BDNF expression are also found in the pituitary gland, spinal cord, heart, lung and skeletal muscle. BDNF binds with high affinity and specifically activates the TrkB tyrosine kinase receptor.

References:

1. Eide, F.F. *et al.* (1993) *Exp. Neurol.* **121**:200.
2. Snider, W.D. (1994) *Cell* **77**:627.
3. Barbacid, M. (1994) *J. Neurobiol.* **25**:1386.