

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human BDNF in ELISAs. In sandwich ELISAs, no cross-reactivity or interference was observed with recombinant human (rh) GDNF, rhβ-NGF, rhNT-3, or rhNT-4.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 37129
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human BDNF Arg128-Arg247 Accession # P23560
<b>Formulation</b>	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.

<b>Human BDNF Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 μg/mL	Human BDNF Antibody (Catalog # MAB848)
<b>ELISA Detection</b>	0.5-2.0 μg/mL	Human BDNF Biotinylated Antibody (Catalog # BAM648)
<b>Standard</b>		Recombinant Human/Mouse/Rat/Canine/Equine BDNF (Catalog # 248-BD)

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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.