

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human BDNF in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) NT-3, rhNT-4, or rhβ-NGF is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 35909
<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 His129-Arg247 Accession # P23560
<b>Conjugate</b>	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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
<b>Intracellular Staining by Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	U-87 MG human glioblastoma/astrocytoma cell line

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</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 precursor protein with a signal peptide and a proprotein that are cleaved to yield the 119 amino acid 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.

## PRODUCT SPECIFIC NOTICES

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