Human BDNF APC-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 35909

Catalog Number: IC2481A

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Monoclonal Mouse IgG_1 Clone # 35909
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human BDNF His129-Arg247 Accession # P23560
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied 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.

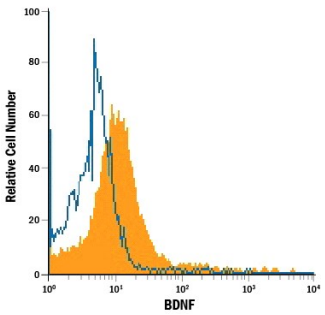
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of BDNF in U-87 MG Human Cell Line by Flow Cytometry. U-87 MG human glioblastoma/astrocytoma cell line was stained with Mouse Anti-Human BDNF APC-conjugated Monoclonal Antibody (Catalog # IC2481A, filled histogram) or isotype control antibody (Catalog # IC002A, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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.

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