Monoclonal Anti-Brain-derived Neurotrophic Factor
Clone 35909
produced in mouse, purified immunoglobulin

Catalog Number B9561

Synonym: Anti-BDNF

Product Description
Monoclonal Anti-Brain-derived Neurotrophic Factor (IgG1 isotype) is purified from a hybridoma, Clone 35909, resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant human Brain Derived Neurotrophic Factor (rhBDNF) (Gene ID: 627) expressed in Sf21 insect cells. The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. Monoclonal Anti-Brain-derived Neurotrophic Factor detects human BDNF in flow cytometry.

Brain-derived neurotrophic factor is a member of the NGF family of neurotrophic factors that includes NGF, NT-3, and NT-4. Neurotrophic factors are required for the differentiation and survival of neuronal subpopulations in the central and peripheral nervous systems. BDNF functions through interactions with the TrkB receptor tyrosine kinase and the low affinity neurotrophin receptor, p75 (NTR).

BDNF has been shown to enhance the survival and differentiation of several classes of neurons in vitro, including neural crest and placode-derived sensory neurons, dopaminergic neurons in the substantia nigra, basal forebrain cholinergic neurons, hippocampal neurons, and retinal ganglial cells.\(^1\) BDNF is expressed within peripheral ganglia and is not restricted to neuronal target fields, raising the possibility that BDNF has paracrine, or even autocrine, actions on neurons as well as non-neuronal cells.\(^2\)

Reagent
Supplied lyophilized from a 0.2 µm filtered solution of phosphate buffered saline with 5% trehalose.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
To one vial of lyophilized powder, add 1 mL of 0.2 µm filtered phosphate buffered saline to produce a 0.5 mg/mL stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability
Prior to reconstitution, store at −20 °C or below. Lyophilized samples are stable for twelve months when stored at −20 °C to −70 °C. Reconstituted product may be stored at 2-8 °C for up to one month without detectable loss of activity. For prolonged storage, the product may be frozen in working aliquots at −20 °C to −70 °C for up to six months without detectable loss of activity. Avoid repeated freezing and thawing.

Results
Flow Cytometry: For intracellular staining to detect human BDNF, cells must first be fixed and permeabilized using 4% paraformaldehyde and 0.1% saponin. Dilute the antibody to 25 µg/mL and add 10 µL of the diluted solution to 1-2.5 x 10^5 cells in a total reaction volume not exceeding 200 µL. Following a 30 minute incubation, cells should be washed with 0.1% saponin prior to adding 10 µL of a 25 µg/mL stock solution of a secondary developing reagent such as goat anti-mouse IgG conjugated to a fluorochrome. Cells should be washed for a final time in 0.1% saponin prior to flow cytometric analysis.
**Note:** In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentrations by titration.

Endotoxin: < 0.1 EU/µg antibody determined by the LAL method.

**References**