ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Brain-Derived Neurotrophic Factor (BDNF) Antibodies

Cat. # BDNF11-M	Mouse Monoclonal Anti-human BDNF IgG	**SIZE**: 100 ul
Cat. # BDNF11-C	Purified Human BDNF protein Western blot +ve control	**SIZE**: 100 ul

The development and maintenance of the vertebrate nervous system depends upon neuronal survival proteins known as neurotrophic factors. **Brain-derived neurotrophic factor (BDNF)** is a member of the neurotrophin family of growth factors that includes NGF, **NT-3**, and **NT-4** 9also designated NT5). Human BDNF (mature protein 119 aa; chromosome 11p13) is produced from a 247 aa propeptide by the cleavage of signal (1-18 aa) and the propeptide (19-128 aa). The mature human and rat IDNF are identical. All neurotrophins have six conserved cysteine residues and share a 55% sequence identity at the amino acid level. 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. The **TrKA receptor** is the preferred receptor for NGF, but also binds NT-3 and Nt-4. The **TrkB receptor** binds equally well both BDNF and NT-4, and to a lesser extent NT-3. The **TrkC receptor** only binds NT-3.

Source of Antigen and Antibodies

Purified K1-3 was and injected into mice. A clone secreting antibodies to human angiogenin was expanded as ascites, and IgG (cat # ANGN13-M) purified by protein A/G column. It is supplied in 100 ul/vial in PBS pH 7.4 (liquid or lyophilized). No preservative is added. Reconstitute in PBS pH 7.4 or other buffers. Store powder at 4 oC. Reconstituted IgG should be aliquoted and stored frozen at –20oC or below.

Antigen	Recombinant human brain BDNF protein expressed in baculovirus cell line Sf21 and purified to >97% purity (119 aa, 13.6 kDa)
Antibody host/type	Mouse, monoclonal affinity purified IgG1, **Cat # BDNF11-M**
Secondary Ab	Cat # 40320, rabbit anti-mouse IgG-HRP (AP, biotin, FITC conjugates also available).
Negative Control Ab	Non-immune mouse IgG (Cat # 20008-1) to be used as –ve control for ELISA, WB, IHC etc.

For WB +ve control (**Cat # BDNF11-C**), it is formulated in SDS-PAGE sample buffer (reduced). This preparation is not biologically inactive. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the NEP11-C solution prior to heating and loading on gels.

Store frozen in suitable aliquots. Do not freeze, thaw, or hear repeatedly.

For Western blot use only. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. It is designed to produce good intensity band when used with appropriate ADI antibodies.

Form & Storage

Aff Pure (purified)

100 ug/vial	50 ug/vial
solution, PBS pH 7.5	lyophilized powder

Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-2 ug/ml using ECL.

ELISA (0.1-1 ug/ml as detecting antibody.

Histochemistry: not tested**.** We recommend the use of 2-10 ug/ml of antibody in paraformaldehyde-fixed, paraffin embedded sections.

Immunoneutralization

BDNF11-M will neutralize the biological activity of recombinant human BDNF. Antibody concentration must be optimized for each application under defined experimental conditions.

Specificity & Cross-reactivity

Anti-human BDNF11-M has no significant (1-5%) reactivity with NGF, NT-3 or NT-4. Antibody crossreactivity in various species is not established. Purified recombinant BDNF protein can be used to block the antibody activity or test antibodies using ELISA or Western. (see detailed protocol at the web site).

General References: Maisonpierre,P.C et al (1991) Genomics 10 (3), 558-568; Shintani A et al (1991) Biochem. Biophys. Res. Commun. 182, 325-332; Robinson RC (1995) Biochemistry 34 (13), 4139-4146; Yancopoulos,G.D et al (1990) Cold Spring Harb. Symp. Quant. Biol. 55, 371-379; Timmusk T et al (1993) Neuron 10 (3), 475-489; Halbook F et al (1991) Neuron 6 (5), 845-858

*This product is for In vitro research use only.

Related material available from ADI

Ant-NGF, NT-3, NT-4, BDNF, Trk receptors, EGF, FGF and other growth factors

BDNF11-M-C 71215J

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