Human Pro-BDNF Antibody

Monoclonal Mouse IgG_{2B} Clone # 584412

Catalog Number: MAB31751

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Pro-BDNF in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse Pro-BDNF is observed and no cross-reactivity with recombinant human β-NGF, NT-4, Pro-NT-3 or Pro-NT-4 is observed. In Western blots, 100% cross-reactivity with recombinant mouse Pro-BDNF is observed and no cross-reactivity with recombinant human mature BDNF or recombinant human NT-3 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 584412
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Pro-BDNF Ala19-Arg247 Accession # P23560
Formulation	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.

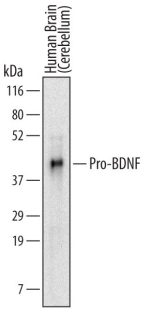
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of human brain cortex

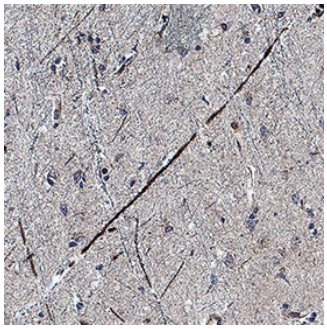
DATA

Western Blot



Detection of Human Pro-BDNF by Western Blot. Western blot shows lysates of human brain (cerebellum) tissue. PVDF Membrane was probed with 2 µg/mL of Mouse Anti-Human Pro-BDNF Monoclonal Antibody (Catalog # MAB31751) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Pro-BDNF at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Detection of BDNF in Human Brain Cortex. BDNF was detected in immersion fixed paraffin-embedded sections of human brain cortex using Mouse Anti-Human Pro BDNF Monoclonal Antibody (Catalog # MAB31751) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal processes. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

BDNF is a member of the NGF family of neurotrophic factors that 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). The human BDNF cDNA encodes 247 amino acids (aa). Cleavage of an 18 aa signal sequence produces an approximately 35 kDa Pro-BDNF form. The N-terminal pro region of BDNF is removed by tPA and furin to release biologically active, 14 kDa BDNF. The propeptides of human and mouse BDNF share 93% aa sequence identity.

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