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Product Information

Anti-BDNF antibody, Mouse monoclonal
clone BDNF129-13, purified from hybridoma cell culture

Product Number **SAB4200744**

Product Description

Anti-BDNF antibody, Mouse monoclonal, (mouse IgG2b isotype) is derived from the BDNF129-13 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized BALB/C mouse. Synthetic peptide corresponding to a region located in the mature human BDNF protein (GeneID: 627) conjugated to KLH, was used as the immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-BDNF specifically recognizes human BDNF protein. The antibody may be used in various immunochemical techniques including Immunoblotting (proBDNF ~34kDa and mature BDNF ~12kDa), Immunohistochemistry, Immunoprecipitation and Immunocytochemistry.

Brain-derived neurotrophic factor (BDNF), also known as Abrineurin, is a secreted dimeric protein belong to the neurotrophin family of growth factors, along with nerve growth factor (NGF) and neurotrophins 3, 4/5 and 6.[1] BDNF is widely expressed in the central nerve system (CNS) and can exert profound effects on development, morphology, synaptic plasticity and brain functions.[2] BDNF neurotrophic effect is mediated through binding to cell receptors such as tropomycin receptor kinase B (TrkB) and p75 neurotrophin receptors.[3-4] BDNF-TrkB interaction possess a crucial role in the synaptic plasticity mechanisms and regulates at least three intracellular signaling pathways: protein kinase C (PKC) activation through phospholipase C-γ (PLC- γ), Ras activation through mitogen-activated protein (MAP) kinase and AKT-mTOR activation through phosphatidylinositol-3′OH-kinase (PI3K).[2,5] Changes in BDNF expression have been extensively investigated in depression[2], drug addition[6], schizophrenia, bipolar and anxiety disorders[7], Huntington's disease[8] and Rett syndrome[9]. In addition, BDNF is associated with Alzheimer's disease (AD) and its reduced levels were detected in post-mortem brain tissues of AD patients.[1]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

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.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2–4 μg/mL is recommended using lysate of human HEK-293T cells over-expressing human BDNF protein.

Immunohistochemistry: a working concentration of 20–40 μg/mL is recommended using pronase retrieved formalin-fixed, paraffin-embedded human cerebellum sections.

Immunoprecipitation: a working concentration of 10–20 μg/test is recommended using lysate of human HEK-293T cells over-expressing human BDNF protein.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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