Human Neurexin 3β/NRXN3b Antibody

Monoclonal Mouse IgG_{2B} Clone # 1125224

Catalog Number: MAB11829

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human NRXN-3 beta protein in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1125224
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived Ser35-Thr357 Accession # Q9HDB5
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

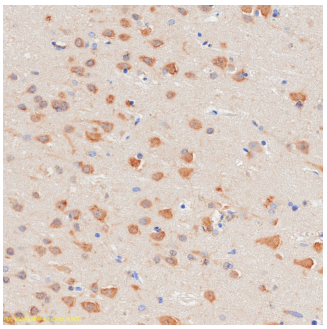
APPLICATIONS

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
Immunohistochemistry	0.25-25 µg/mL	Immersion fixed paraffin-embedded sections of cortex

DATA

Immunohistochemistry



Immersion fixed paraffin-embedded sections of cortex
Neurexin 3β/NRXN3b was detected in immersion fixed paraffin-embedded sections of cortex using Mouse Anti-Human Neurexin 3β/NRXN3b Monoclonal Antibody (Catalog # MAB11829) at 5 µg/ml overnight at 4 °C. 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 the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
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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Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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BACKGROUND

The alpha and beta forms of Neurexins 1-3 are transmembrane neuronal glycoproteins which are transcribed from each of three NRXN genes that utilize alternate promoters. Like other Neurexins, the extracellular domain (ECD) of Neurexin 3α contains six LNS domains interspersed with three EGF-like domains, while that of Neurexin 3β contains only the sixth LNS domain and no EGF-like domains (1-3). Mature human Neurexin 3β is a 70 kDa glycosylated protein with a 528 amino acid (aa) ECD and a 56 aa cytoplasmic domain that contains a motif for binding PDZ scaffolding proteins (3-5). Within comparable regions of the ECD, human Neurexin 3β shares 99% aa sequence identity with mouse and rat Neurexin 3β. It shares 65% aa sequence identity with comparable regions of the ECD of human Neurexin 1β and 2β. Alternative splicing of human Neurexin 3β generates multiple isoforms. There are potentially soluble and secreted variants and some which contain a fibronectin type III-like domain (4, 6). Neurexin 3β is widely expressed in the brain where it binds the postsynaptic Neuroligins 1, 2, and 3 (6-9). Neurexin 3β may also be expressed in non-nervous tissues with a potentially cardiac-specific isoform (10). Human Neurexin 3β polymorphisms which affect the splicing pattern are associated with susceptibility to alcohol dependence (6). The Neurexin 3β genetic locus has been linked to opioid and nicotine addiction, and Neurexin 3β gene expression is upregulated after short term exposure of mice to cocaine (11-13).

References:

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