# Human/Mouse Neurexin 3/NRXN3 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF5269

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human/Mouse |
| **Specificity** | Detects human and mouse Neurexin 3/NRXN3 in Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human Neurexin 1β is observed and less than 5% cross-reactivity recombinant rat (rr) Neurexin 1α and rrNeurexin 2β is observed. |
| **Source** | Polyclonal Sheep IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human Neurexin 3/NRXN3<br>Ser35-Thr357<br>Accession # NP_620426 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS. |

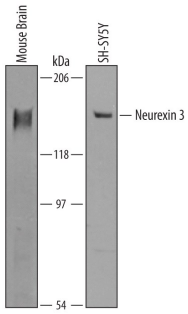
## APPLICATIONS

**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** | 1 µg/mL | See Below |
| **Immunohistochemistry** | 5-15 µg/mL | Immersion fixed paraffin-embedded sections of human brain (cerebellum and cortex) |

## DATA

### Western Blot




**Detection of Human and Mouse Neurexin 3/NRXN3 by Western Blot.** Western blot shows lysates of mouse brain tissue and SH-SY5Y human neuroblastoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse Neurexin 3/NRXN3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5269) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Neurexin 3/NRXN3 at approximately 160-170 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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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 up-regulated after short term exposure of mice to cocaine (11-13).

**References:**

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