

## DESCRIPTION

|                           |                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse                                                                                                                                                                             |
| <b>Specificity</b>        | Detects human and mouse Neuroplastin 65 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human Neuroplastin 55 is observed.         |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                     |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                               |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Neuroplastin 65<br>Gln29-His336<br>Accession # NP_036560                                                                          |
| <b>Formulation</b>        | 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. |

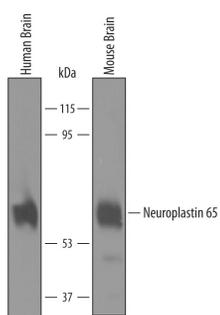
## APPLICATIONS

**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    |
|-----------------------------|---------------------------|-----------|
| <b>Western Blot</b>         | 1 µg/mL                   | See Below |
| <b>Immunohistochemistry</b> | 5-15 µg/mL                | See Below |

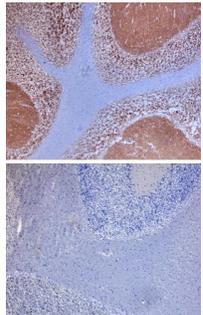
## DATA

**Western Blot**



**Detection of Human/Mouse Neuroplastin 65 by Western Blot.** Western blot shows lysates of human brain and mouse brain tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse Neuroplastin 65 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5360) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Neuroplastin 65 at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

**Immunohistochemistry**



**Neuroplastin 65 in Human Brain.** Neuroplastin 65 was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using 3 µg/mL Goat Anti-Human/Mouse Neuroplastin 65 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5360) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.                                                                                                                                                                                                                                                                                                                |
| <b>Shipping</b>                | 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                                                                                                                       |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

Neuroplastin (NPTN; also stromal cell-derived receptor 1 and Np55) is a 52-57 kDa member of the Ig-superfamily. It is widely expressed and likely serves as a cell adhesion molecule in multiple tissues. Human Neuroplastin is 282 amino acids (aa) in length. It is a type I transmembrane glycoprotein that contains two Ig-like domains (aa 32-119 and 122-213) and a 38 aa cytoplasmic region (aa 245-282). There is a brain-enriched 65 kDa form (Np65) that negatively regulates LTP in the hippocampus. It contains an N terminal 116 aa Ig-like domain-containing insert after Asn30 and interacts homotypically. Notably, human and rodent Np65 expression patterns are different in brain, with rodent Np65 not predominating in cerebellum. Over aa 29-336, human Np65 is 95% aa identical to mouse Np65.