

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Neuroplastin in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Neuroplastin 55 isoform 1 Gln29-Ser219 Accession # Q9Y639.1
<b>Formulation</b>	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.

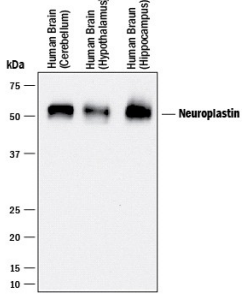
## APPLICATIONS

**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
<b>Western Blot</b>	0.2 µg/mL	See Below
<b>Immunohistochemistry</b>	1-15 µg/mL	See Below

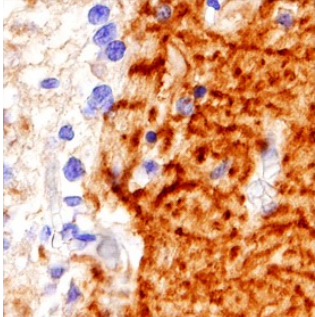
## DATA

**Western Blot**



**Detection of Human Neuroplastin by Western Blot.** Western blot shows lysates of human brain (cerebellum, hypothalamus, and hippocampus) tissue. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human Neuroplastin Isoform 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5174) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Neuroplastin at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunohistochemistry**



**Neuroplastin in Human Brain.** Neuroplastin was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using 1.7 µg/mL Sheep Anti-Human Neuroplastin Isoform 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5174) overnight at 4 °C. Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific labeling was localized to the dendrites of Purkinje cells. 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. *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 homophilically. There is a third potential splice variant that shows an alternate start site at Met85 accompanied by a 23 aa substitution for aa 200-282. Over aa 29-229, human Neuroplastin is 91% aa identical to mouse Neuroplastin.