

## DESCRIPTION

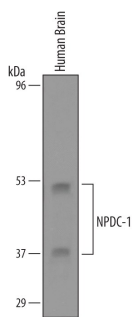
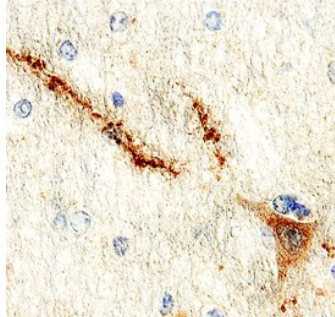
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human NPDC-1 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human NPDC-1 Gly35-Asp181 Accession # Q9NQX5
<b>Formulation</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 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human NPDC-1 by Western Blot.</b> Western blot shows lysates of human brain tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human NPDC-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5489) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for NPDC-1 at approximately 40 kDa and 54 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>NPDC-1 in Human Brain.</b> NPDC-1 was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Sheep Anti-Human NPDC-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5489) at 3 µg/mL 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 using the Anti-Sheep HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies and synaptic vesicles of neuronal processes. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>
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## 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>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

NPDC-1 (Neural proliferation differentiation and control protein 1) is a 35 kDa member of the NPDC1/cab1 family of proteins. It is principally expressed in neurons, and serves as an anti-proliferation agent. It may accomplish this, in part, by binding to E2F-1 and blocking its protranscriptional activity. Mature human NPDC-1 is 291 amino acids (aa) in length. It is a type I transmembrane protein that contains an NLS (aa 107-124), an HLH domain (aa 95-128), a transmembrane domain (aa 182-202), and a PEST degradation sequence (aa 269-302). Phosphorylation promotes ubiquitination at this latter site. There are two splice variants. One shows a deletion of aa 242-263, while another shows a nine aa substitution for the nine aa in positions 218-226. Over aa 35-181, human NPDC-1 shares 68% aa identity with mouse NPDC-1.