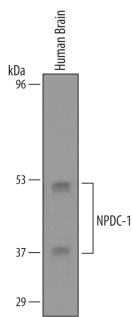
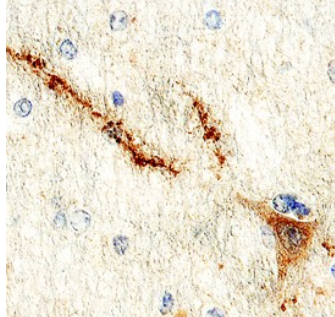


DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human NPDC-1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human NPDC-1 Gly35-Asp181 Accession # Q9NQX5
Formulation	Lyophilized 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. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA	
<p>Western Blot</p>  <p>Detection of Human NPDC-1 by Western Blot. 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>Immunohistochemistry</p>  <p>NPDC-1 in Human Brain. 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 & 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 Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>

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. *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. <ul style="list-style-type: none"> ● 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.

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.