

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Protocadherin alpha 1 (PCDH $\alpha 1$) in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Protocadherin $\alpha 1$ Gln30-Pro689 Accession # Q9Y5I3
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

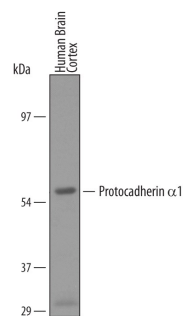
APPLICATIONS

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 μ g/mL	See Below
Immunohistochemistry	5-15 μ g/mL	See Below

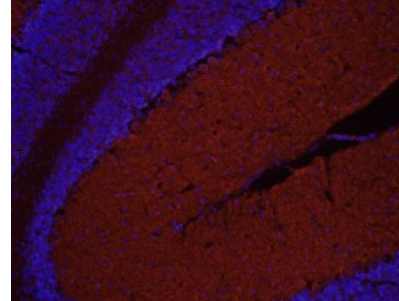
DATA

Western Blot



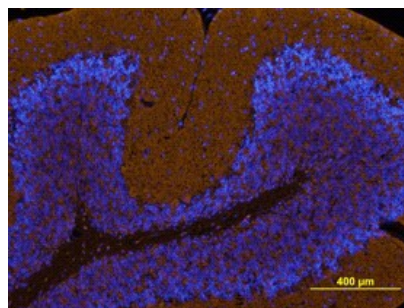
Detection of Human Protocadherin $\alpha 1$ by Western Blot. Western blot shows lysates of human brain cortex tissue. PVDF membrane was probed with 1 μ g/mL of Sheep Anti-Human Protocadherin $\alpha 1$ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5064) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Protocadherin $\alpha 1$ at approximately 50-60 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 8*.

Immunohistochemistry



Protocadherin $\alpha 1$ in Mouse Brain. Protocadherin $\alpha 1$ was detected in immersion fixed frozen sections of mouse brain (cerebellum) using 10 μ g/mL Sheep Anti-Human Protocadherin $\alpha 1$ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5064) overnight at 4 °C. Tissue was stained with the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counter-stained with DAPI (blue). View our protocol for *Fluorescent IHC Staining of Frozen Tissue Sections*.

Immunohistochemistry



Protocadherin $\alpha 1$ in Mouse Brain. Protocadherin $\alpha 1$ was detected in perfusion fixed frozen sections of mouse brain using Sheep Anti-Human Protocadherin $\alpha 1$ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5064) at 10 μ g/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (yellow; Catalog # NL010) and counter-stained with DAPI (blue). View our protocol for *Fluorescent IHC Staining of Frozen Tissue Sections*.

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

Protocadherin α 1 (PCDH α 1) is a group A member of the Protocadherin family of molecules. It is expressed in synaptic membranes of neurons, forms obligate Ca⁺⁺ independent complexes with various PCDH γ family members and demonstrates heterophilic binding activity towards β 1 integrins. Human PCDH α 1 is 921 amino acids (aa) in length. It is a type I transmembrane glycoprotein that contains a 668 aa extracellular domain (ECD) plus a 232 aa cytoplasmic region. Both regions contribute to PCDH- γ binding. There are six cadherin domains in the ECD. ADAM10 cleavage generates an 80-90 kDa soluble fragment and a soluble splice form exists that is missing aa 535-798. Over aa 30-689, human PCDH α 1 shares 83% aa identity with mouse PCDH α 1.