Human Protocadherin-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF5899

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Protocadherin-1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) Protocadherin-8 and rhProtocadherin-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Protocadherin-1 Thr58-Asn162 Accession # Q08174
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.

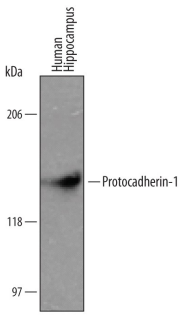
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

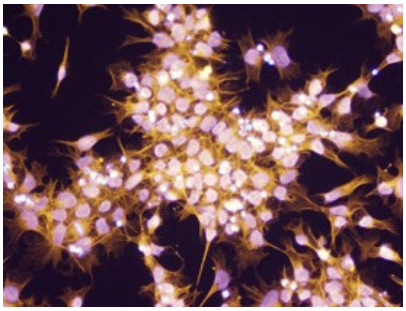
DATA

Western Blot



Detection of Human Protocadherin-1 by Western Blot. Western blot shows lysates of human hippocampus tissue. PVDF membrane was probed with 1 µg/mL of Human Protocadherin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5899) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Protocadherin-1 at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunocytochemistry



Protocadherin-1 in BG01V Human Stem Cells. Protocadherin-1 was detected in immersion fixed BG01V human embryonic stem cells using Human Protocadherin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5899) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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.** ● 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-1 (PCDH-1; also PC42) is a 150 - 170 kDa δ1 subgroup member of the nonclustered protocadherin family of molecules. It is expressed on macrophages, respiratory epithelium, endothelial cells and neurons. Protocadherin-1 apparently forms homophilic Ca^{++}-dependent complexes and likely serves as an adhesion molecule. Human full-length Protocadherin-1 precursor is 1237 amino acids (aa) in length. It is a type I transmembrane glycoprotein that contains a 795 aa extracellular domain (ECD) (aa 58 - 852) plus a 364 aa cytoplasmic region. There are seven cadherin domains in the ECD (aa 58 - 844), and an RRVTF cytoplasmic motif that binds PP1α phosphatase. There are multiple splice variants. Alternative start sites exist at Met23 and Met235, there is a deletion of aa 209 - 220, and a 27 aa substitution for aa 1034 - 1237. Over aa 58 - 162, human Protocadherin-1 shares 96% aa identity with mouse Protocadherin-1.

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