Human Protocadherin-1 Antibody

Monoclonal Mouse IgG_1 Clone # 648127

Catalog Number: MAB5899

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Protocadherin-1 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 648127
Purification	Protein A or G purified from hybridoma culture supernatant
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.

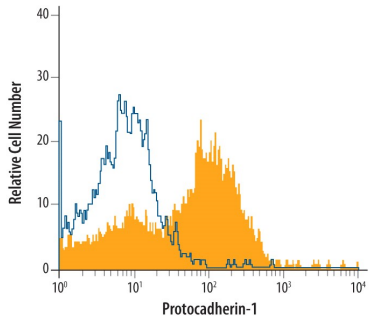
APPLICATIONS

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
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

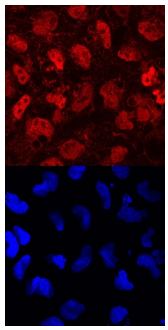
DATA

Flow Cytometry



Detection of Protocadherin-1 in A431 Human Cell Line by Flow Cytometry. A431 human epithelial carcinoma cell line was stained with Mouse Anti-Human Protocadherin-1 Monoclonal Antibody (Catalog # MAB5899, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

Immunocytochemistry



Protocadherin-1 in BG01V Human Embryonic Stem Cells. Protocadherin-1 was detected in immersion fixed BG01V human embryonic stem cells using Mouse Anti-Human Protocadherin-1 Monoclonal Antibody (Catalog # MAB5899) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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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