Human P-Cadherin Antibody

Monoclonal Mouse IgG_1 Clone # 104805

Catalog Number: MAB861

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human P-Cadherin in direct ELISAs and Western blots. In Western blots, does not cross-react with recombinant human (rh) Cadherin-8, recombinant mouse P-Cadherin, or rhVE-Cadherin.
Source	Monoclonal Mouse IgG_1 Clone # 104805
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human P-Cadherin Asp108-Gly654 Accession # CAA45177
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 as a 0.2 μm filtered solution in PBS.

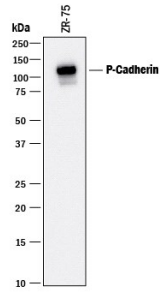
APPLICATIONS

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
Flow Cytometry	0.25 µg/10^6 cells	A431 human epithelial carcinoma cell line stained in buffer containing Ca^{2+} and Mg^{2+}
Immunocytochemistry	8-25 µg/mL	See Below
Simple Western	10 µg/mL	See Below
Human P-Cadherin Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human P-Cadherin Antibody (Catalog # MAB861)
ELISA Detection	0.1-0.4 µg/mL	Human P-Cadherin Biotinylated Antibody (Catalog # BAF861)
Standard		Recombinant Human P-Cadherin Fc Chimera (Catalog # 861-PC)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

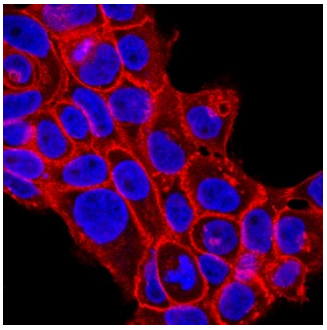
DATA

Western Blot



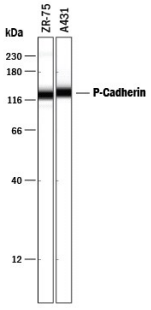
Detection of Human P-Cadherin by Western Blot. Western blot shows lysate of ZR-75 human breast cancer cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human P-Cadherin Monoclonal Antibody (Catalog # MAB861) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for P-Cadherin at approximately 120 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



P-Cadherin in A431 Human Cell Line. P-Cadherin was detected in immersion fixed A431 human epithelial carcinoma cell line using Mouse Anti-Human P-Cadherin Monoclonal Antibody (Catalog # MAB861) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI(blue). Specific staining was localized to the cell surface. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Simple Western



Detection of Human P-Cadherin by Simple Western™. Simple Western lane view shows lysates of ZR-75 human breast cancer cell line and A431 human epithelial carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for P-Cadherin at approximately 135 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human P-Cadherin Monoclonal Antibody (Catalog # MAB861) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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Human P-Cadherin Antibody

Monoclonal Mouse IgG_1 Clone # 104805

Catalog Number: MAB861

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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

Placental (P) - Cadherin (PCAD) is a member of the Cadherin family of cell adhesion molecules. Cadherins are calcium-dependent transmembrane proteins, which bind to one another in a homophilic manner. On their cytoplasmic side, they associate with the three catenins, α, β, and γ (plakoglobin). This association links the cadherin protein to the cytoskeleton. Without association with the catenins, the cadherins are non-adhesive. Cadherins play a role in development, specifically in tissue formation. They may also help to maintain tissue architecture in the adult. P-Cadherin is a classical cadherin molecule. Classical cadherins consist of a large extracellular domain which contains DXD and DXNDN repeats responsible for mediating calcium-dependent adhesion, a single-pass transmembrane domain, and a short carboxy-terminal cytoplasmic domain responsible for interacting with the catenins. Human P-Cadherin is an 829 amino acid (aa) protein with a 26 aa signal sequence and an 803 aa propeptide. The mature protein begins at aa 108 and has a 548 aa extracellular region, a 23 aa transmembrane region, and a 151 aa cytoplasmic region. The human and mouse mature PCAD proteins share 87% homology.

References:

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3. Overduin, M. *et al.* (1995) Science **267**:386.
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5. Nose, A. *et al.* (1987) EMBO J. **6**:3655.

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