

DESCRIPTION

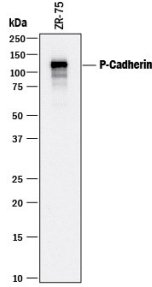
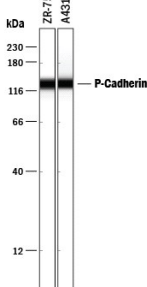

Species Reactivity	Human
Specificity	Detects human P-Cadherin in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) Cadherin-11, rhCadherin-12, rhCadherin-13, rhE-Cadherin and less than 1% cross-reactivity with rhCadherin-8, rhCadherin-17, rhN-Cadherin, rhK-Cadherin and recombinant mouse P-Cadherin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
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
Simple Western	10 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

<p>Western Blot</p>  <p>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 Goat Anti-Human P-Cadherin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF861) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). 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.</p>	<p>Simple Western</p>  <p>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 Goat Anti-Human P-Cadherin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF861) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 
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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

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:

1. Shimoyama, Y. *et al.* (1989) *J. Cell Biol.* **109**:1787.
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3. Overduin, M. *et al.* (1995) *Science* **267**:386.
4. Takeichi, M. (1991) *Science* **251**:1451.
5. Nose, A. *et al.* (1987) *EMBO J.* **6**:3655.