

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	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.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 104805
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human P-Cadherin Asp108-Gly654 Accession # CAA45177
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	A431 human epithelial carcinoma cell line stained in buffer containing Ca <sup>2+</sup> and Mg <sup>2+</sup>

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## 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.
2. Bussemakers, M.J.G. *et al.* (1993) *Mol. Biol. Reports* **17**:123.
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.

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