

DESCRIPTION	
<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human E-Cadherin, P-Cadherin, N-Cadherin and mouse E-Cadherin in Western blots. Due to the high homology of the immunogen used, this antibody is designed to be pan specific to Cadherins.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 1006132
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Synthetic peptide containing human E-Cadherin Accession # P12830
<b>Formulation</b>	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.

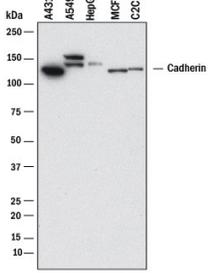
## APPLICATIONS

**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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-25 µg/mL	See Below

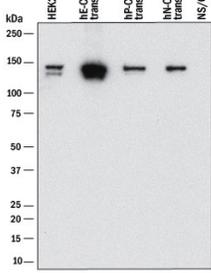
## DATA

**Western Blot**



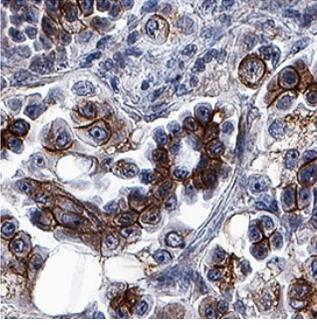
**Detection of Human and Mouse Cadherin by Western Blot.** Western blot shows lysates of A431 human epithelial carcinoma cell line, A549 human lung carcinoma cell line, HepG2 human hepatocellular carcinoma cell line, MCF-7 human breast cancer cell line, and C2C12 mouse myoblast cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse Cadherin Pan Specific Monoclonal Antibody (Catalog # MAB18385) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for Cadherin at approximately 135 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Western Blot**



**Detection of Human Cadherins by Western Blot.** Western blot shows lysates of HEK293T human embryonic kidney cell line mock transfected or transfected with human E-Cadherin and NS0 mouse myeloma cell line transfected with Human P-Cadherin, N-Cadherin, or mock transfected. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse Cadherin Pan Specific Monoclonal Antibody (Catalog # MAB18385) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Cadherin at approximately 135 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunohistochemistry**



**Cadherin in Human Cystadenocarcinoma.** Cadherin was detected in immersion fixed paraffin-embedded sections of human papillary serous cystadenocarcinoma of the colon using Mouse Anti-Human/Mouse Cadherin Pan Specific Monoclonal Antibody (Catalog # MAB18385) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membrane. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

## BACKGROUND

Epithelial (E)-Cadherin (ECAD), also known as Cadherin-1, cell-CAM120/80 in the human, uvomorulin in the mouse, Arc-1 in the dog, and L-CAM in the chicken, is a member of the Cadherin family of cell adhesion molecules (gene name CDH1). 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,  $\alpha$ ,  $\beta$ , and  $\gamma$  (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. E-Cadherin may also play a role in tumor development, as loss of E-Cadherin has been associated with tumor invasiveness. E-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. E-Cadherin contains five extracellular calcium-binding domains of approximately 110 amino acids each (amino acids 155-697).

### References:

1. Bussemakers, M.J.G. *et al.* (1993) Mol. Biol. Reports **17**:123.
2. Overduin, M. *et al.* (1995) Science **267**:386.
3. Takeichi, M. (1991) Science **251**:1451.