**Product Name: E-cadherin Rabbit Polyclonal Antibody**
**Catalog #: APRab10278**

## Summary

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| **Production Name** | E-cadherin Rabbit Polyclonal Antibody |
| **Description** | Rabbit Polyclonal Antibody |
| **Host** | Rabbit |
| **Application** | WB,IHC-P,IF-P,IF-F,ICC/IF,ELISA |
| **Reactivity** | Human,Mouse,Rat |

## Performance

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| **Conjugation** | Unconjugated |
| **Modification** | Unmodified |
| **Isotype** | IgG |
| **Clonality** | Polyclonal |
| **Form** | Liquid |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |
| **Buffer** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| **Purification** | Affinity purification |

## Immunogen

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| **Gene Name** | CDH1 |
| **Alternative Names** | CDH1; CDHE; UVO; Cadherin-1; CAM 120/80; Epithelial cadherin; E-cadherin; Uvomorulin; CD antigen CD324; CDH2; CDHN; NCAD; Cadherin-2; CDw325; Neural cadherin; N-cadherin; CD antigen CD325; CDH3; CDHP; Cadherin-3; Placental cadherin; P-cadhe |
| **Gene ID** | 999/1000/1001/1002 |
| **SwissProt ID** | P12830/P19022/P22223/P55283.The antiserum was produced against synthesized peptide derived from human Cadherin. AA range:833-882 |

## Application

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| **Dilution Ratio** | WB 1:500-1:2000, IHC-P 1:100-300, ELISA 1:20000, IF-P/IF-F/ICC/IF 1:100-300, Not yet |

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| | tested in other applications. |
| **Molecular Weight** | 125-130kDa |

## Background

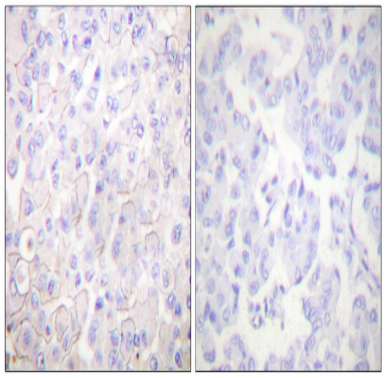
This gene encodes a classical cadherin of the cadherin superfamily. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed to generate the mature glycoprotein. This calcium-dependent cell-cell adhesion protein is comprised of five extracellular cadherin repeats, a transmembrane region and a highly conserved cytoplasmic tail. Mutations in this gene are correlated with gastric, breast, colorectal, thyroid and ovarian cancer. Loss of function of this gene is thought to contribute to cancer progression by increasing proliferation, invasion, and/or metastasis. The ectodomain of this protein mediates bacterial adhesion to mammalian cells and the cytoplasmic domain is required for internalization. This gene is present in a gene cluster with other members of the cadherin family on chromosome 16. [provided by RefSeq, Nov 2015],disease:Defects in CDH1 are a cause of gastric cancer [MIM:137215]; also known as hereditary familial diffuse gastric cancer (HDGC).,disease:Defects in CDH1 are a cause of susceptibility to endometrial cancer [MIM:608089].,disease:Defects in CDH1 are associated with ovarian cancer [MIM:167000]. Ovarian cancer is the leading cause of death from gynecologic malignancy. It is characterized by advanced presentation with loco-regional dissemination in the peritoneal cavity and the rare incidence of visceral metastases. These typical features relate to the biology of the disease, which is a principal determinant of outcome.,disease:Defects in CDH1 are involved in dysfunction of the cell-cell adhesion system, triggering cancer invasion (gastric, breast, ovary, endometrium and thyroid) and metastasis.,function:Cadherins are calcium dependent cell adhesion proteins.,function:Cadherins are calcium-dependent cell adhesion proteins. They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types. CDH1 is involved in mechanisms regulating cell-cell adhesions, mobility and proliferation of epithelial cells. Has a potent invasive suppressor role. It is a ligand for integrin alpha-E/beta-7.,function:E-Cad/CTF2 promotes non-amyloidogenic degradation of Abeta precursors. Has a strong inhibitory effect on APP C99 and C83 production.,online information:E-cadherin entry,PTM:During apoptosis or with calcium influx, cleaved by a membrane-bound metalloproteinase (ADAM10), PS1/gamma-secretase and caspase-3 to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. Processing by the metalloproteinase, induced by calcium influx, causes disruption of cell-cell adhesion and the subsequent release of beta-catenin into the cytoplasm. The residual membrane-tethered cleavage product is rapidly degraded via an intracellular proteolytic pathway. Cleavage by caspase-3 releases the cytoplasmic tail resulting in disintegration of the actin microfilament system. The gamma-secretase-mediated cleavage promotes disaaaembly of adherens junctions.,similarity:Contains 5 cadherin domains.,subcellular location:Colocalizes with DLGAP5 at sites of cell-cell contact in intestinal epithelial cells. Anchored to actin microfilaments through association with alpha-, beta- and gamma-catenin. Sequential proteolysis induced by apoptosis or calcium influx, results in translocation from sites of cell-cell contact to the cytoplasm.,subunit:Homodimer; disulfide-linked. Interacts directly, via the cytoplasmic domain, with CTNNB1 or JUP to form the PSEN1/cadherin/catenin adhesion complex which connects to the actin skeleton through the

actin binding of alpha-catenin. Interaction with PSEN1, cleaves CDH1 resulting in the disassociation of cadherin-based adherens junctions (CAJs). Interacts with AJAP1, CTNND1 and DLGAP5.,tissue specificity:Non-neural epithelial tissues.,

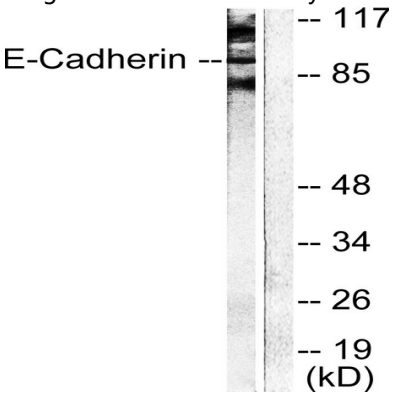
## Research Area

Cell adhesion molecules (CAMs);Adherens_Junction;Pathogenic Escherichia coli infection;Pathways in cancer;Endometrial cancer;Thyroid cancer;Melanoma;Bladder cancer;

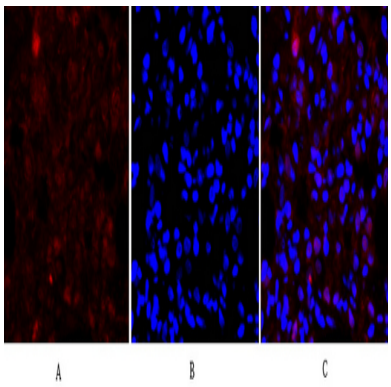
## Image Data



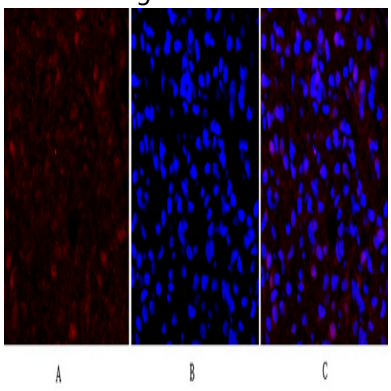
Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using Cadherin-pan Antibody. The picture on the right is blocked with the synthesized peptide.




Western blot analysis of lysates from NIH/3T3 cells, using Cadherin-pan Antibody. The lane on the right is blocked with the synthesized peptide.




Immunofluorescence analysis of rat-lung tissue. 1,E-cadherin Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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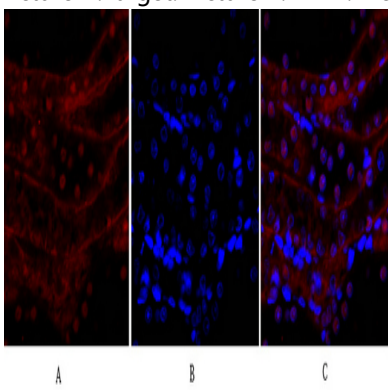


Immunofluorescence analysis of rat-kidney tissue. 1,E-cadherin Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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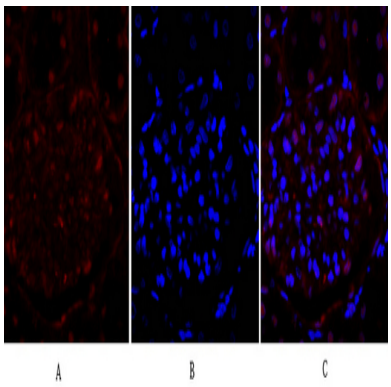


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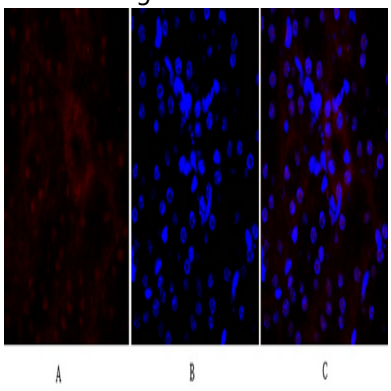
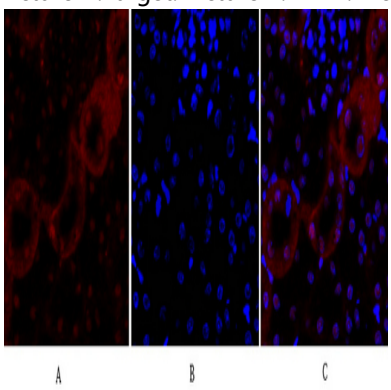



Immunofluorescence analysis of mouse-kidney tissue. 1,E-cadherin Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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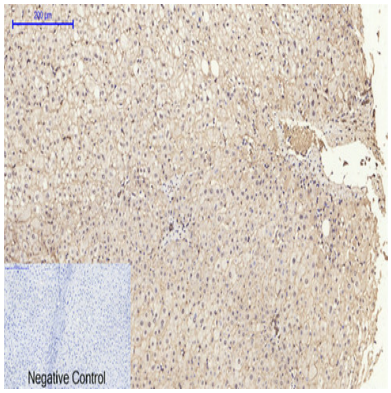


Immunohistochemical analysis of paraffin-embedded Human-liver tissue. 1,E-cadherin Polyclonal Antibody was diluted at 1:200（4°C,overnight）. 2, Sodium citrate pH 6.0 was used for antibody retrieval（>98°C,20min）. 3,Secondary antibody was diluted at 1:200（room tempeRature, 30min）. Negative control was used by secondary antibody only.

## Note

For research use only.