CDH1 Antibody – Goat Polyclonal

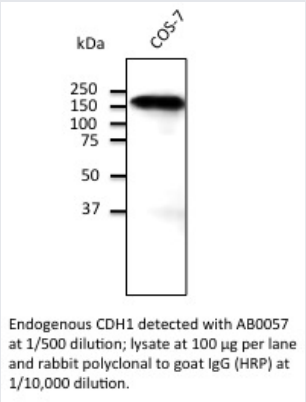
PRODUCT OVERVIEW

Product Name	CDH1, Polyclonal Antibody
Full Product Name	E-Cadherin Polyclonal Antibody
Product Gene Name	anti-CDH1 antibody
Product Synonym Names	ARC-1, CAM 120/80, CD324, CDH1, cdhc-A, CDHE, ECAD, E-Cad E-cadherin, Epithelial cadherin, l-cam, LCAM, P09803, P12830 / Q9R0T4, UVO, Uvomorulin, XBcad, XB-cadherin, XTCAD-1 antibody.
Clonality	Polyclonal
Isotype	IgG
Host	Goat
Species Reactivity	Reacts against human, rat, mouse, canine, and monkey proteins.
Form/Format	Polyclonal antibody supplied as 200 ul (2 mg/ml) aliquot in PBS, 20% glycerol and 0.05% sodium azide. This antibody is epitope-affinity purified from goat antiserum.
Specificity	Detects endogenous levels of total E-cadherin protein by Western blot in the whole cell lysates (COS-7 and MDCK).
Preparation and Storage	Store at -20°C for long term storage. Store at 2-8°C for up to one month. Avoid freeze/thaw cycles.
Chromosome Location	Chromosome: 16; NC_000016.10 (68737292..68835541). Location: 16q22.1
OMIM	137215
3D Structure	ModBase 3D Structure for P12830
Immunogen	Recombinant peptide derived from within residues 750 to 850 of human CDH1 produced in E. coli.
Applications Tested/Suitable for anti-CDH1 antibody	Western Blot (WB)
Application Notes for anti-CDH1 antibody	Western Blot: 1:500-1:2,000
Related Product Information for anti-CDH1 antibody	E-Cadherin Goat polyclonal to CDH1. CDH1 is a classical member of the cadherin superfamily. This protein is a calcium dependent cell-cell adhesion glycoprotein comprised consists of 5 cadherin repeats in the extracellular domain, one transmembrane domain, and a and a highly conserved intracellular domain that binds b-catenin and p120-catenin. CDH1 is involved in mechanisms regulating proliferation, mobility and cell-cell adhesions of epithelial cells. Loss of E-cadherin function or expression has been implicated in cancer metastasis and progression.
Other Notes	Small volumes of anti-CDH1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CDH1 purchase	MBS448004 is an antibody targeting CDH1. Also known as E-Cadherin Polyclonal Antibody. Reactive in Reacts against human, rat, mouse, canine, and monkey proteins.. Host: Goat.

Reactivity chart

Sample	Western Blot	Immuno-fluorescence	Immuno-Histochemistry (p)	Immuno-Histochemistry (f)
human	+++	ND	ND	ND
mouse	+++	ND	ND	ND
rat	+++	ND	ND	ND
monkey	+++	ND	ND	ND
canine	+++	ND	ND	ND

Reactivity Chart of anti-CDH1 antibody



Testing Data of anti-CDH1 antibody

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDH1. It may not necessarily be applicable to this product.

NCBI GI #	148921649
NCBI GeneID	999
NCBI Accession #	AAI46663.1
UniProt Primary Accession #	P12830
UniProt Secondary Accession #	Q13799; Q14216; Q15855; Q16194; Q4PJ14; A8K1U7
UniProt Related Accession #	P12830
NCBI Official Full Name	CDH1 protein
NCBI Official Synonym Full Names	cadherin 1, type 1, E-cadherin (epithelial)
NCBI Official Symbol	CDH1
NCBI Official Synonym Symbols	UVO; CDHE; ECAD; LCAM; Arc-1; CD324
UniProt Protein Name	Cadherin-1
UniProt Synonym Protein Names	CAM 120/80; Epithelial cadherin; E-cadherin; Uvomorulin
Protein Family	Anaphase-promoting complex
UniProt Gene Name	CDH1
UniProt Synonym Gene Names	CDHE; UVO; E-cadherin
UniProt Entry Name	CADH1_HUMAN
NCBI Protein Information	cadherin-1; CAM 120/80; E-Cadherin; uvomorulin; cell-CAM 120/80; epithelial cadherin; cadherin 1, E-cadherin (epithelial); calcium-dependent adhesion protein, epithelial
NCBI Summary for CDH1	This gene is a classical cadherin from the cadherin superfamily. The encoded protein is a calcium dependent cell-cell adhesion glycoprotein 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 is thought to contribute to progression in cancer 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. Identified transcript variants arise from mutation at consensus splice sites. [provided by RefSeq, Jul 2008]

UniProt Comments for CDH1

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. Ref.25E-Cad/CTF2 promotes non-amyloidogenic degradation of Abeta precursors. Has a strong inhibitory effect on APP C99 and C83 production. Ref.25

Subunit structure: Homodimer; disulfide-linked. Component of an E-cadherin/ catenin adhesion complex composed of at least E-cadherin/CDH1, beta-catenin/CTNNB1 or gamma-catenin/JUP, and potentially alpha-catenin/CTNNA1; the complex is located to adherens junctions. The stable association of CTNNA1 is controversial as CTNNA1 was shown not to bind to F-actin when assembled in the complex. Alternatively, the CTNNA1-containing complex may be linked to F-actin by other proteins such as LIMA1. Interaction with PSEN1, cleaves CDH1 resulting in the disassociation of cadherin-based adherens junctions (CAJs). Interacts with AJAP1, CTNND1 and DLGAP5

By similarity. Interacts with TBC1D2. Interacts with LIMA1. Interacts with CAV1. Interacts with the TRPV4 and CTNNB1 complex

By similarity. Interacts with PIP5K1C. Interacts with RAB8B

By similarity. Interacts with RAPGEF2

By similarity. Interacts with DDR1; this stabilizes CDH1 at the cell surface and inhibits its internalization. Ref.10 Ref.17 Ref.19 Ref.20 Ref.21 Ref.22 Ref.23 Ref.29 Ref.31 Ref.32

Subcellular location: Cell junction. Cell membrane; Single-pass type I membrane protein. Endosome. Golgi apparatus › trans-Golgi network. Note: 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. Colocalizes with RAB11A endosomes during its transport from the Golgi apparatus to the plasma membrane. Ref.4 Ref.21 Ref.24 Ref.32

Tissue specificity: Non-neural epithelial tissues.

Induction: Expression is repressed by MACROD1. Ref.26

Domain: Three calcium ions are usually bound at the interface of each cadherin domain and rigidify the connections, imparting a strong curvature to the full-length ectodomain. Ref.16

Post-translational modification: 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 disassembly of adherens junctions. Ref.4 Ref.15 Ref.18N-glycosylation at Asn-637 is essential for expression, folding and trafficking.Ubiquitinated by a SCF complex containing SKP2, which requires prior phosphorylation by CK1/CSNK1A1. Ubiquitinated by CBLL1/HAKAI, requires prior phosphorylation at Tyr-754. Ref.34 Ref.35

Involvement in disease: Hereditary diffuse gastric cancer (HDGC) [MIM:137215]: A cancer predisposition syndrome with increased susceptibility to diffuse gastric cancer. Diffuse gastric cancer is a malignant disease characterized by poorly differentiated infiltrating lesions resulting in thickening of the stomach. Malignant tumors start in the stomach, can spread to the esophagus or the small intestine, and can extend through the stomach wall to nearby lymph nodes and organs. It also can metastasize to other parts of the body.Note: The disease is caused by mutations affecting the gene represented in this entry. Heterozygous CDH1 germline mutations are responsible for familial cases of diffuse gastric cancer. Somatic mutations has also been found in patients with sporadic diffuse gastric cancer and lobular breast cancer. Ref.47 Ref.52Endometrial cancer (ENDMC) [MIM:608089]: A malignancy of endometrium, the mucous lining of the uterus. Most endometrial cancers are adenocarcinomas, cancers that begin in cells that make and release mucus and other fluids.Note: Disease susceptibility is associated with variations affecting the gene represented in this entry.Ovarian cancer (OC) [MIM:167000]: The term ovarian cancer defines malignancies originating from ovarian tissue. Although many histologic types of ovarian tumors have been described, epithelial ovarian carcinoma is the most common form. Ovarian cancers are often asymptomatic and the recognized signs and symptoms, even of late-stage disease, are vague. Consequently, most patients are diagnosed with advanced disease.Note: Disease susceptibility is associated with variations affecting the gene represented in this entry.Breast cancer, lobular (LBC) [MIM:137215]: A type of breast cancer that begins in the milk-producing glands (lobules) of the breast.Note: The gene represented in this entry may be involved in disease pathogenesis. Ref.27

Sequence similarities: Contains 5 cadherin domains.

Research Articles on CDH1	**1.** In high grade malignant tumors (G1), CDH1 and ITGB1 gene expression was the highest, in G2 and G3 tumors the expression of both genes was gradually lowering
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