Revision 1

#42919 Store at -20C

Cadherin-17 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	120	Rabbit	#Q12864	1015

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Cadherin-17 Antibody recognizes endogenous levels of total Cadherin-17 protein. Based upon sequence alignment, this antibody is not predicted to cross-react with Cadherin-16 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human Cadherin-17 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Cadherins are a superfamily of transmembrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development (1). The classic cadherin subfamily includes N-, P-, R-, B-, and E-cadherins, as well as about ten other members that are found in adherens junctions, a cellular structure near the apical surface of polarized epithelial cells. The cytoplasmic domain of classical cadherins interacts with β-catenin, γ-catenin (also called plakoglobin), and p120 catenin. β-catenin and γ-catenin associate with α-catenin, which links the cadherin-catenin complex to the actin cytoskeleton (1,2). While β- and γ-catenin play structural roles in the junctional complex, p120 regulates cadherin adhesive activity and trafficking (1-4). Investigators consider E-cadherin an active suppressor of invasion and growth of many epithelial cancers (1-3). Research studies indicate that cancer cells have upregulated N-cadherin in addition to loss of E-cadherin. This change in cadherin expression is called the "cadherin switch." N-cadherin cooperates with the FGF receptor, leading to overexpression of MMP-9 and cellular invasion (3). Research studies have shown that in endothelial cells, VE-cadherin signaling, expression, and localization correlate with vascular permeability and tumor angiogenesis (5,6). Investigators have also demonstrated that expression of P-cadherin, which is normally present in epithelial cells, is also altered in ovarian and other human cancers (7,8).

Cadherin-17/Liver-Intestine-cadherin (CDH17/LI-cadherin) is a type-I transmembrane glycoprotein that belongs to the 7D-cadherin superfamily. Unlike classical cadherins, CDH17 is characterized by an extracellular domain with seven cadherin repeats and a short cytoplasmic domain that does not display any homology to the cytoplasmic domain of classical cadherins (9). CDH17 is a calcium-dependent homotypic cell-cell adhesion molecule that is selectively expressed on the basolateral surface of polarized epithelia lining the small intestine and colon of humans under normal physiological conditions (10). Research studies have demonstrated that CDH17 is aberrantly overexpressed in human gastric cancer and may serve as a novel oncogenic biomarker for this disease (11,12). At the molecular level, research studies have suggested that CDH17 exerts its oncogenicity in the context of gastric cancer through its ability to engage both NF-κB and MAPK signaling cascades (13,14).

Background References

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3. Hazan, R.B. et al. (2004) *Ann N Y Acad Sci* 1014, 155-63.
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8. Sanders, D.S. et al. (2000) *J Pathol* 190, 526-30.
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13. Lin, Z. et al. (2014) *PLoS One* 9, e85296.
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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses