E-Cadherin (Cytoplasmic)

Mouse Monoclonal

Cat. # CM1681
Size 100 µl

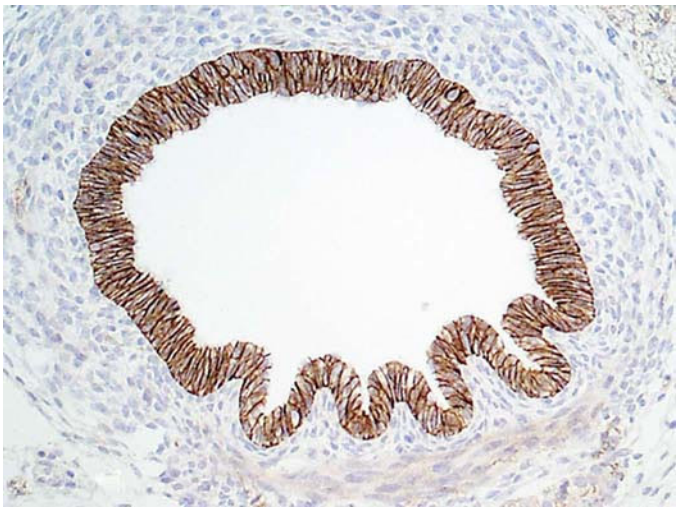
Background

Cadherins are transmembrane glycoproteins vital in calcium-dependent cell-cell adhesion during tissue differentiation. Cadherins cluster to form foci of homophilic binding units. A key determinant to the strength of the cadherin-mediated adhesion may be by the juxtamembrane region in cadherins. This region induces clustering and also binds to the protein p120 catenin. The cytoplasmic region is highly conserved in sequence and has been shown experimentally to regulate the cell-cell binding function of the extracellular domain of E-cadherin, possibly through interaction with the cytoskeleton. Many cadherins are regulated by phosphorylation, including N-cadherin and E-cadherin. N-cadherin is phosphorylated by c-Src at Tyr-820, Tyr-853, Tyr-860, Tyr-884, and Tyr-886. Phosphorylation of Tyr-860 can disrupt cadherin binding to β-catenin. Since many of these tyrosine sites are conserved in the cadherin family, phosphorylation of these sites may be critical for cadherin function.

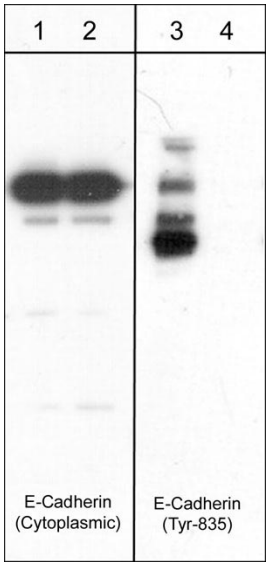
GO mAb
Guaranteed to Outperform

Background References

Takeichi, M. (1988) Development 102:639.
Xu, Y. et al. (1997) J. Biol. Chem. 272(21):13463.
Qi, J. et al. (2006) Mol. Biol. Cell 17(3):1261.



Formalin fixed, citric acid treated parafin sections of embryonic Rat E16 intestines. Sections were probed with anti-E-Cadherin (CM1681) then anti-mouse:HRP before detection using DAB. (Images provided by Carl Hobbs and Dr. Pat Doherty at Wolfson Centre for Age-Related Diseases, King's College London).



Western blot image of human A431 cells treated with pervanadate (1 mM) for 30 min (lanes 1 & 3) then treated with akaline phosphatase (lanes 2 & 4). Blots were probed with anti-E-Cadherin (Cytoplasmic) and anti-N-Cadherin (Tyr-860)/E-Cadherin (Tyr-835) conserved site.

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Rev 7/16/2020

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Immunogen

Uniprot ID: P09803

Clone (M168) was generated from a mouse recombinant E-Cadherin protein containing amino acids in the C-terminal region. This sequence is highly conserved in human and rat E-cadherin.

Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Product Citations

Pastor-Cleriguesab, A et al. (2016) Curr Eye Res. 41(7):890.
IHC: bovine cornea

Signorelli, P. et al. (2015) Nutr Cancer. 67(3):494.
WB: human HCT116 cells

Liu, D. et al. (2015) Am J Pathol. 185(1):110.
ICC/IHC: rat Liver epithelial cells

Milara, J. et al. (2015) COPD. 12(3):320.
ICC: human bronchial epithelial cells

Milara, J. et al. (2014) Pulm Pharmacol Ther. 28(2):138.
Protein Array: human bronchial endothelial cells

Applications

WB	1:1000
ELISA	1:2000
ICC	1:250
IP	1:100
IHC	1:50

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This E-cadherin antibody detects a 120 kDa* protein in human A431 cells, and does not cross-react with VE-cadherin or N-cadherin.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.
"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

CP1751 N-Cadherin (a.a. 811-824) Rabbit Polyclonal
CP1901 N-Cadherin (a.a. 853-864)[E-Cadherin (a.a. 828-839)] Rabbit Polyclonal
CM1701 N-Cadherin (Cytoplasmic) Mouse Monoclonal
CP1801 N-Cadherin (Tyr-820), phospho-specific Rabbit Polyclonal
CP1851 Unphosphorylated N-Cadherin (Tyr-820) Rabbit Polyclonal
CP1951 N-Cadherin (Y860)[E-Cadherin (Y835)], phospho-specific Rabbit Polyclonal

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