

Datasheet: MCA5698

Description:	MOUSE ANTI HUMAN N-CADHERIN
Specificity:	N-CADHERIN
Other names:	CD325
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	13A9
Isotype:	IgG1
Quantity:	0.2 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			1/100 - 1/1000
Immunofluorescence	▪			

The PrecisionAb label is reserved for antibodies that meet the defined performance criteria within Bio-Rad's ongoing antibody validation programme. Click [here](#) to learn how we validate our PrecisionAb range. Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using steam heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.

Target Species	Human
Species Cross	Reacts with: Rat

Reactivity **N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form Purified IgG - liquid

Preparation Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution Phosphate buffered saline

Preservative Stabilisers 0.09% Sodium Azide (NaN₃)

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0mg/ml

Immunogen Recombinant MBP fusion protein containing the entire cytoplasmic domain of human N-cadherin.

External Database Links

UniProt:

[P19022](#)

[Related reagents](#)

[Q9Z1Y3](#)

[Related reagents](#)

Entrez Gene:

[1000](#)

CDH2

[Related reagents](#)

[83501](#)

Cdh2

[Related reagents](#)

Synonyms CDHN, NCAD

RRID AB_11152772

Specificity **Mouse anti Human N-cadherin antibody, clone 13A9** recognizes neural cadherin, otherwise known as CD325, a calcium dependent cell-cell adhesion glycoprotein, and member of the cadherin superfamily, which links to the actin cytoskeleton via catenins, and plays a role in cell-matrix adhesion, cell growth and differentiation, and the establishment of left-right asymmetry.

N-cadherin is expressed by neurons, endothelial cells, muscle cells, and stem cells, and is one of the primary cadherins recruited to the site of neuronal synapse formation.

N-cadherin is directly involved in the differentiation of early hematopoietic progenitors, and is commonly expressed by cancer cells, playing a role in transendothelial migration and metastasis, through the up-regulation of the src kinase pathway, and subsequent failure of the intercellular connection between two adjacent endothelial cells.

Mouse anti Human N-cadherin antibody, clone 13A9 does not recognize E-cadherin, M-cadherin or P-cadherin ([Knudsen et al. 1995](#)). Mouse anti Human N-cadherin antibody, clone 13A9 is a reliable marker for the differential diagnosis of pleural mesotheliomas and lung adenocarcinomas, when used in conjunction with E-cadherin ([Han et al. 1997](#)).

Western Blotting MCA5698 detects a band of approximately 135-140kDa in human HeLa cell lysates.

- References**
1. Sacco, P.A. *et al.* (1995) Identification of plakoglobin domains required for association with N-cadherin and alpha-catenin. [J Biol Chem. 270: 20201-6.](#)
 2. Peralta Soler, A. *et al.* (1995) The differential expression of N-cadherin and E-cadherin distinguishes pleural mesotheliomas from lung adenocarcinomas. [Hum Pathol. 26 \(12\): 1363-9.](#)
 3. Knudsen, K.A. *et al.* (1995) Interaction of alpha-actinin with the cadherin/catenin cell-cell adhesion complex via alpha-catenin. [J Cell Biol. 130 \(1\): 67-77.](#)
 4. Islam, S. *et al.* (1996) Expression of N-cadherin by human squamous carcinoma cells induces a scattered fibroblastic phenotype with disrupted cell-cell adhesion. [J Cell Biol. 135 \(6 Pt 1\): 1643-54.](#)
 5. Han, A.C. *et al.* (1997) Differential expression of N-cadherin in pleural mesotheliomas and E-cadherin in lung adenocarcinomas in formalin-fixed, paraffin-embedded tissues. [Hum Pathol. 28 \(6\): 641-5.](#)
 6. Peralta Soler, A. *et al.* (1999) P-cadherin expression in breast carcinoma indicates poor survival. [Cancer. 86: 1263-72.](#)
 7. Nieman, M.T. *et al.* (1999) N-cadherin promotes motility in human breast cancer cells regardless of their E-cadherin expression. [J Cell Biol. 147 \(3\): 631-44.](#)
 8. Machell, N.H. *et al.* (2000) Developmental expression and distribution of N- and E-cadherin in the rat ovary. [Biol Reprod. 63 \(3\): 797-804.](#)
 9. Van Aken, E.H. *et al.* (2002) Structure and function of the N-cadherin/catenin complex in retinoblastoma. [Invest Ophthalmol Vis Sci. 43 \(3\): 595-602.](#)
 10. Wahl, J.K. 3rd *et al.* (2003) N-cadherin-catenin complexes form prior to cleavage of the proregion and transport to the plasma membrane. [J Biol Chem. 278 \(19\): 17269-76.](#)
 11. Shintani, Y. *et al.* (2006) Phosphoinositide-3 kinase-Rac1-c-Jun NH2-terminal kinase signaling mediates collagen I-induced cell scattering and up-regulation of N-cadherin expression in mouse mammary epithelial cells. [Mol Biol Cell. 17: 2963-75.](#)
 12. Theisen, C.S. *et al.* (2007) NHERF links the N-cadherin/catenin complex to the platelet-derived growth factor receptor to modulate the actin cytoskeleton and regulate cell motility. [Mol Biol Cell. 18: 1220-32.](#)
 13. Tian, G. *et al.* (2009) Clarin-1, encoded by the Usher Syndrome III causative gene, forms a membranous microdomain: possible role of clarin-1 in organizing the actin cytoskeleton. [J Biol Chem. 284: 18980-93.](#)

Storage This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee 12 months from date of despatch

Acknowledgements PrecisionAb is a trademark of Bio-Rad Laboratories

Health And Safety Information Material Safety Datasheet documentation #10040 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA5698>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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