ARG22587
anti-N Cadherin antibody [13A9]

Package: 100 µg, 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [13A9] recognizes Cadherin-N/N-Cadherin This antibody 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 studies have demonstrated that expression levels of E-Cadherin and N-Cadherin have a role to play in the invasive properties of breast cancer. Decreased levels of E-cadherin and loss of E-cadherin-mediated adhesion, can result in the transition of a benign epithelial tumor to an invasive tumor, and increase invasiveness, whilst the expression of N-cadherin correlates with motility, invasiveness and tumor metastasis, irrespective of the presence of E-cadherin (Nieman et al. 1999).Mouse anti Human N-cadherin antibody, clone 13A9 has been shown to be specific for N-cadherin, and does not recognize E-cadherin, M-cadherin or P-cadherin (Knudsen et al. 1995). Immunohistological studies have shown that clone 13A9 can be used as a reliable marker for the differential diagnosis of pleural mesotheliomas and lung adenocarcinomas, when used in conjunction with E-cadherin (Han et al. 1997).
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-Fr, IHC-P, IP, WB
Host	Mouse
Clonality	Monoclonal
Clone	13A9
Isotype	IgG1
Target Name	N Cadherin
Species	Human
Immunogen	Recombinant MBP fusion protein containing the entire cytoplasmic domain of human N-cadherin.
Conjugation	Un-conjugated
Alternate Names	Neural cadherin; N-cadherin; CD antigen CD325; Cadherin-2

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50-1:200
IHC-Fr	1:50-1:200
IHC-P	1:50-1:200
IP	2 µg
WB	1:100 - 1:1000

Application Note	IHC-P: 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. Western Blotting: MCA5698 detects a band of approximately 135-140kDa in human HT-1080 and HeLa cell lysates. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

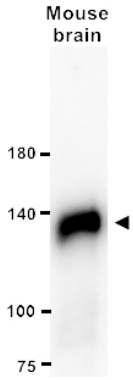
Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS and 0.09% Sodium azide
Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

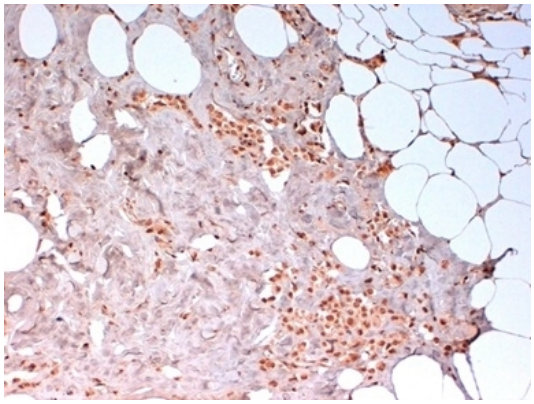
Gene Symbol	Cdh2
Gene Full Name	cadherin 2
Background	N Cadherin is a classical cadherin and member of the cadherin superfamily. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein is proteolytically processed to generate a calcium-dependent cell adhesion molecule and glycoprotein. This protein plays a role in the establishment of left-right asymmetry, development of the nervous system and the formation of cartilage and bone. [provided by RefSeq, Nov 2015]
Function	N Cadherin is a calcium-dependent cell adhesion protein; preferentially mediates homotypic cell-cell adhesion by dimerization with a CDH2 chain from another cell. Cadherins may thus contribute to the sorting of heterogeneous cell types. Acts as a regulator of neural stem cells quiescence by mediating anchorage of neural stem cells to ependymocytes in the adult subependymal zone: upon cleavage by MMP24, CDH2-mediated anchorage is affected, leading to modulate neural stem cell quiescence. CDH2 may be involved in neuronal recognition mechanism. In hippocampal neurons, may regulate dendritic spine density. [UniProt]
Research Area	EMT Study antibody; Mesenchymal Markers antibody
Calculated Mw	100 kDa
PTM	Cleaved by MMP24. Ectodomain cleavage leads to the generation of a soluble 90 kDa amino-terminal soluble fragment and a 45 kDa membrane-bound carboxy-terminal fragment 1 (CTF1), which is further cleaved by gamma-secretase into a 35 kDa. Cleavage in neural stem cells by MMP24 affects CDH2-mediated anchorage of neural stem cells to ependymocytes in the adult subependymal zone, leading to modulate neural stem cell quiescence (By similarity). May be phosphorylated by OBSCN.

Images



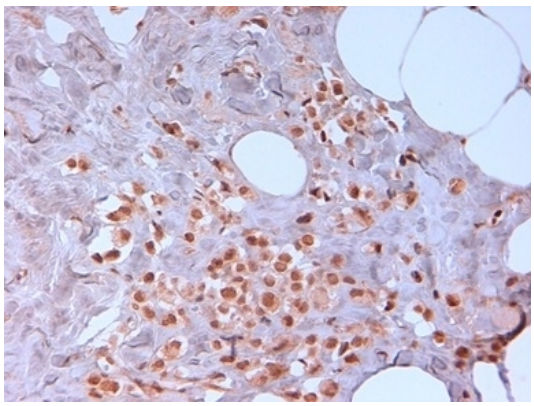
ARG22587 anti-N Cadherin antibody [13A9] WB image

Western blot: 20 µg of Mouse brain lysate stained with ARG22587 anti-N Cadherin antibody [13A9] at 1:1000 dilution.



ARG22587 anti-Cadherin-N/N-Cadherin antibody [13A9] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human breast cancer biopsy stained with ARG22587 anti-Cadherin-N/N-Cadherin antibody [13A9] followed by HRP polymer detection and DAB substrate development. Antigen Retrieval: Boil tissue section in citrate buffer (pH 6.2). (low power).



ARG22587 anti-Cadherin-N/N-Cadherin antibody [13A9] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human breast cancer biopsy stained with ARG22587 anti-Cadherin-N/N-Cadherin antibody [13A9] followed by HRP polymer detection and DAB substrate development. Antigen Retrieval: Boil tissue section in citrate buffer (pH 6.2). (high power).