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Anti-N-Cadherin / Cadherin-2 / CD325 (NCAD) Antibody

Mouse Monoclonal Antibody
Catalog # AH13071

Product Information

Application	WB, IHC-P, IF, FC
Primary Accession	P19022
Other Accession	464829
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	8C11
Calculated MW	99809

Additional Information

Gene ID	1000
Other Names	Cadherin-2 N cadherin neuronal; Cadherin-2 type 1; Cadherin-2; Calcium dependent adhesion protein neuronal; CD325; CDH2; CDHN; CDw325; N-Cadherin; NCAD
Application Note	Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (1-2ug/ml); ,Western Blotting (0.5-1.0ug/ml); ,Immunohistology (Formalin-fixed) (0.5-1.0ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tis with1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-N-Cadherin / Cadherin-2 / CD325 (NCAD) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDH2
Synonyms	CDHN, NCAD
Function	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. Plays a role in cell-to-cell junction formation between pancreatic beta cells and neural crest stem (NCS) cells, promoting the formation of processes by NCS cells (By similarity). Required for proper neurite branching. Required for pre- and postsynaptic organization (By similarity). CDH2 may be involved in neuronal recognition mechanism. In hippocampal neurons, may regulate dendritic spine density.
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:P15116}. Cell junction. Cell surface {ECO:0000250|UniProtKB:P15116}. Cell junction, desmosome {ECO:0000250|UniProtKB:P15116}. Cell junction, adherens junction {ECO:0000250|UniProtKB:P15116}. Note=Colocalizes with TMEM65 at the intercalated disk in cardiomyocytes. Colocalizes with OBSCN at the intercalated disk and at sarcolemma in cardiomyocytes {ECO:0000250|UniProtKB:P15116}

Background

Recognizes a protein of ~140kDa, identified as N-Cadherin (NCAD), also known as CD325. NCAD is a member of the Cadherin superfamily, and consists of five extracellular repeats, a transmembrane domain and a cytoplasmic domain. CD325 deficient mice die at day 10 of gestation and embryos display major heart defects and malformed neural tubes and somites. Consistent with this, CD325 has been implicated in several aspects of cardiac development including the precardiac mesoderm, establishment of left-right symmetry and cardiac looping morphogenesis. Furthermore, CD325 is normally involved in inducing cell cycle arrest and its expression is frequently deregulated in cancer cells. Studies have linked N-cadherin to cancer metastasis by showing the aggressive tumor cells had preferentially turned on N-cadherin as opposed to E- or P-cadherin.