abcam

ab98952

Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker

Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952) is a mouse monoclonal antibody detecting N-Cadherin/CD325 in **Western Blot, Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Over 160 publications
- Trusted since 2010

Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	5D5
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/500 - 1/2000
Notes	-

Species	Rat
Dilution info	1/500 - 1/2000
Notes	-

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information N-Cadherin/CD325

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. May promote axon outgrowth and motor fiber repair via DSP-mediated recruitment to outgrowth tips (By similarity).

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-N Cadherin antibody [5D5] - Intercellular Junction Marker (ab98952) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of N Cadherin?
Anti-N Cadherin [5D5] - Intercellular Junction Marker (ab98952) specifically detects a band for N Cadherin (UniProt: P19022) at a molecular weight of 100kDa.

Trusted by the scientific community
Anti-N Cadherin [5D5] - Intercellular Junction Marker (ab98952) was first used in a scientific publication in 2010 and has been cited over 160 times in peer-reviewed journals.

Reviewed by scientists
Anti-N Cadherin [5D5] - Intercellular Junction Marker (ab98952) has over 5 independent reviews from customers.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	N-Cadherin also known as CDH2 or neuronal cadherin is a calcium-dependent cell adhesion protein. It is characterized by its role in mediating intercellular connections primarily through its presence on neurons fibroblasts and certain epithelial cells. N-Cadherin has an approximate mass of 130 kDa. The protein is integral in forming homophilic interactions where N-Cadherin molecules on adjacent cells interact to establish robust cell-cell adhesion.
Biological function summary	N-Cadherin significantly influences cell-cell interaction and communication facilitating cellular adhesion and signal transduction. It is a vital component of adherens junctions contributing to tissue morphogenesis and stability. N-Cadherin interacts with other cytoplasmic proteins such as catenins forming a complex essential for linking the actin cytoskeleton to the cell membrane. This interaction affects cellular behaviors including migration and differentiation.
Pathways	N-Cadherin plays a significant role in the neural development and epithelial-to-mesenchymal transition (EMT) pathways important for development and cancer

	progression. It engages with related proteins such as beta-catenin which helps transduce signals within these pathways. N-Cadherin's interactions within these pathways highlight its role in maintaining multicellular structure and signaling processes important for development and pathogenesis.
Associated diseases and disorders	N-Cadherin is associated with cancer and heart disease. In cancer particularly in the context of the EMT N-Cadherin facilitates tumor progression and metastasis cooperating with proteins like Twist and Snail to promote these processes. In heart disease alterations in N-Cadherin expression and function can impact cardiac muscle integrity and syncytium highlighting potential interactions with connexin43 to maintain cardiac function. Understanding these associations provides insights into therapeutic targets for these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

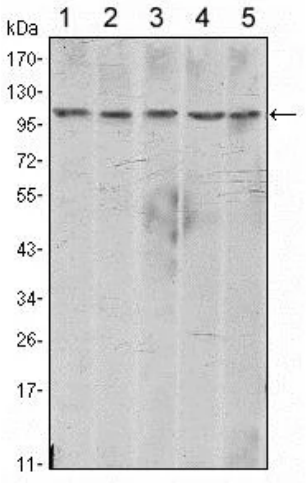
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

8 product images



Western blot - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Western blot staining using mouse Anti-N-Cadherin/CD325 antibody

All lanes:
Western blot - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952) at 1/500 dilution

Lane 1:
A431 cell lysate at 15 µL

Lane 2:
NIH-3T3 cell lysate at 15 µL

Lane 3:
HeLa cell lysate at 15 µL

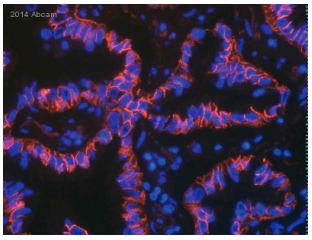
Lane 4:
C6 cell lysate at 15 µL

Lane 5:
LNCap cell lysate at 15 µL

Secondary

All lanes:
HRP-Goat Anti-Mouse Igg (Fc) at 1/10000 dilution

Predicted band size: 99 kDa

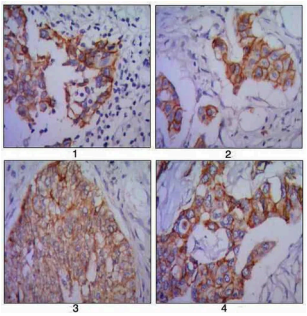


This image is courtesy of an anonymous customer review

Immunocytochemistry/ Immunofluorescence - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-N-Cadherin/CD325 antibody

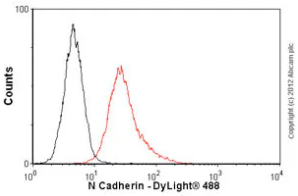
ab98952 staining N Cadherin in paraffin-embedded human lung cancer tissue by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with HOPE and blocked. Samples were incubated with primary antibody (1/200) for 1 hour at 25°C. A TRITC-conjugated goat anti-mouse IgG polyclonal (1/200) was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-N-Cadherin/CD325 antibody

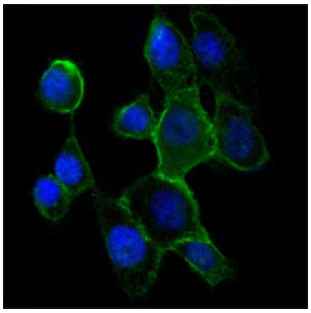
Immunohistochemical analysis of paraffin-embedded Human lung cancer (1), colon cancer (2), ovarian cancer (3) and mammary cancer (4), using ab98952 at 1/200 dilution with DAB staining.



Flow Cytometry - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Flow Cytometry staining using mouse Anti-N-Cadherin/CD325 antibody

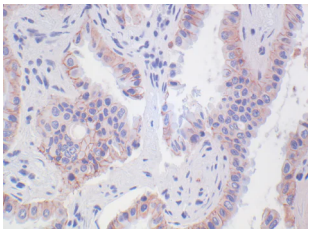
Overlay histogram showing HeLa cells stained with ab98952 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab98952, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-N-Cadherin/CD325 antibody

Immunofluorescence analysis of A431 cells using ab98952 at 1/200 dilution (green). Blue: DRAQ5 fluorescent DNA dye



This image is courtesy of an anonymous customer review

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-N-Cadherin/CD325 antibody

ab98952 staining N Cadherin in human NSCLC tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with using HOPE technique and blocked for 5 minutes at 25°C. Samples were incubated with primary antibody (1/200) for 1 hour at 25°C. An undiluted HRP-conjugated goat anti-mouse IgG polyclonal was used as the secondary antibody.

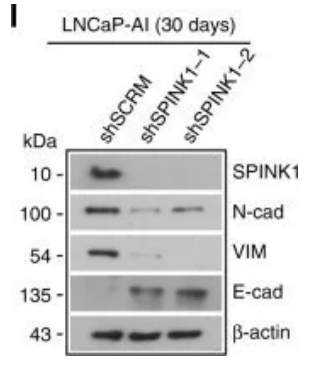


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Western blot - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Western blot staining using mouse Anti-N-Cadherin/CD325 antibody

Western Blotting using Anti-N Cadherin antibody [5D5] - Intercellular Junction Marker, ab98952. Publication image from Poutanen, M. et al., 2020, Nat Commun, 31959826. Legend direct from paper.

Androgen-deprivation upregulates SPINK1 in NE-transdifferentiated PCa cells.a Bar graph showing SPINK1 expression (top) and heatmap of AR-signaling associated genes including SPINK1 in long-term androgen deprived (AD) LNCaP cells (GSE8702). b Representative phase-contrast images of androgen-deprived LNCaP cells (LNCaP-AI). Red arrow-heads indicate neurite outgrowth. c QPCR data showing relative expression of SPINK1 and KLK3 using same cells as b. d Immunoblot assay for SPINK1, PSA, SYP, ENO2, SOX2 and REST using same cells as in b. e Immunostaining for SPINK1 using same cells as in b. f Schematic representation of NE-transdifferentiation (NE-td) using

doxycycline (dox)-inducible AR-V7 overexpressing LNCaP cells subjected to androgen deprivation (AD) with or without induction (40 ng/ml) at day 10 and cultured upto 30 days. g QPCR data showing relative expression of SPINK1 and KLK3 using same cells as f. h Immunoblot assay for AR, AR-V7, SPINK1, and PSA using same cells as f. i QPCR data showing relative expression of SYP, NCAM1, ENO2 and CHGA using the same cells as f. j Schema describing generation of LNCaP-AI-shSPINK1 and LNCaP-AI-shSCRM cells by subjecting stable LNCaP-shSPINK1 and LNCaP-shSCRM cells to androgen deprivation (AD) for 30 days. k Representative images for the neurite outgrowths in LNCaP-AI-shSCRM cells and LNCaP-AI-shSPINK1 as j (top). QPCR data showing relative expression of SPINK1 (bottom, left) and measurement of neurite outgrowth (bottom, right). l Immunoblot analysis for SPINK1, E-Cad, VIM, and N-Cad expression using same cells as j. m Same as in l, except phospho (p) and total (t) AKT, SYP and ENO2 expression. n Representative IHC images for SPINK1 in SPINK1-negative (SPINK1−, top) and SPINK1-positive (SPINK1+, bottom) PCa tumor cores of the VPC tissue microarray (scale bar = 200 µm). Bar plot showing percentage cases of SPINK1 in untreated (n = 33) and neoadjuvant-hormone therapy (NHT) treated patients (n = 55). Experiments were performed with n = 3 biologically independent samples; data represents mean ± SEM. For panels b, e, k scale bar represents 20 µm. For panel c two-way ANOVA, Dunnett's multiple-comparisons; g, i two-way ANOVA, Sidak's multiple-comparisons test; k one-way ANOVA, Dunnett's multiple-comparisons test were applied. ⋆P ≤ 0.05 and ⋆⋆P ≤ 0.001. Source data for d, h, l, m are provided as a Source Data file.

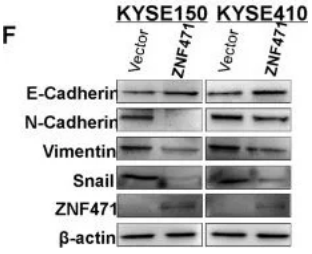


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Western blot - Anti-N-Cadherin/CD325 antibody [5D5] - Intercellular Junction Marker (ab98952)

N-Cadherin/CD325 Western blot staining using mouse Anti-N-Cadherin/CD325 antibody

Western Blotting using Anti-N Cadherin antibody [5D5] - Intercellular Junction Marker, ab98952. Publication image from Luo, J. et al., 2020, Theranostics, 32089740. Legend direct from paper.

ZNF471 inhibits ESCC cell migration and invasion and EMT. (A) Morphological changes of ESCC cells infected with control vector and ZNF471 by phase contrast microscopy. Scale bars: 200 µm. (B) Cell migration abilities of ESCC cells evaluated by wound healing assays. Photographs captured at 0, 12 and 24 h. The cellular migration (C) and invasion (D) abilities of ESCC cells upon ectopic expression of ZNF471 were measured by Transwell assays with or without Matrigel. Representative images were photographed following fixation and staining. Scale bars: 50 µm. (E, F) qRT-PCR and western blot analysis of EMT, and downstream target markers. Student's test was used. Data are presented as the mean ± SD. *p<0.05, **p<0.01, ***p<0.001.

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