

# Product Datasheet

## NDC80 Antibody (9G3.23) - Azide and BSA Free NB100-338

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Updated 2/21/2025 v.20.1

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**NB100-338**

NDC80 Antibody (9G3.23) - Azide and BSA Free

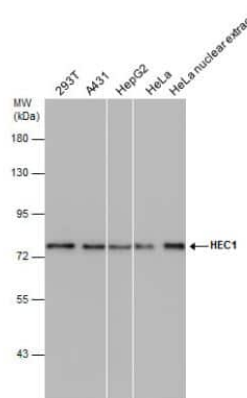
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	9G3.23
Preservative	No Preservative
Isotype	IgG2a
Purity	Protein A purified
Buffer	PBS
Target Molecular Weight	80 kDa

Product Description	
Host	Mouse
Gene ID	10403
Gene Symbol	NDC80
Species	Human, Mouse, Hamster, Marsupial
Reactivity Notes	Kangaroo rat (100%).
Immunogen	Human NDC80 protein consisting of amino acids 56-642.

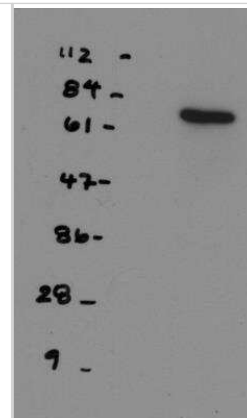
Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Proximity Ligation Assay
Recommended Dilutions	Western Blot 1:500-1:3000, Flow Cytometry, Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 1:100-1:1000, Immunoprecipitation 1-5 ug/ml, Immunohistochemistry-Frozen 1:10 - 1:500, Proximity Ligation Assay

**Images**

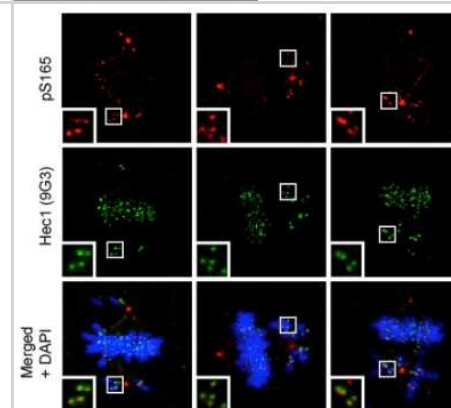
Western Blot: NDC80 Antibody (9G3.23) [NB100-338] - HEC1 antibody [9G3.23] detects HEC1 protein by western blot analysis. Various whole cell extracts and HeLa nuclear extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with HEC1 antibody [9G3.23] diluted at 1:1000. The HRP-conjugated anti-mouse IgG antibody (NBP2-193821) was used to detect the primary antibody, and the signal was developed with Trident femto Western HRP Substrate.



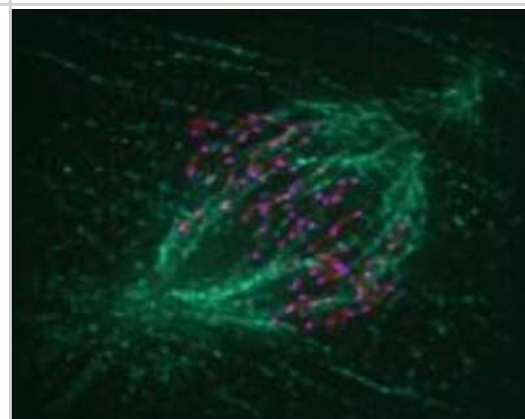
Western Blot: NDC80 Antibody (9G3.23) [NB100-338] - WB analysis of NDC80 in U2OS Whole Cell Lysate. Verified customer review from 1DegreeBio.



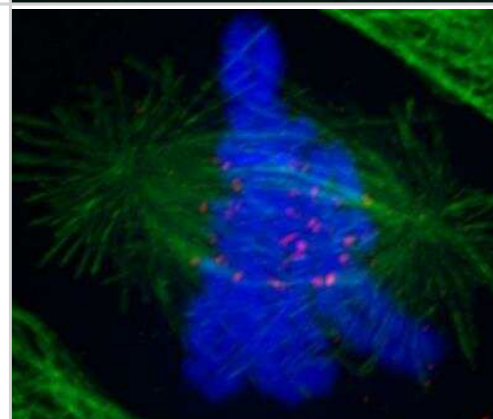
Immunocytochemistry/Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - Mouse anti-Hec1 and rabbit anti-Hec1 (phospho Ser165) antibodies were used to co-stain MCF10A cells. Insets show kinetochores of misaligned chromosomes. DAPI staining shows chromatin.



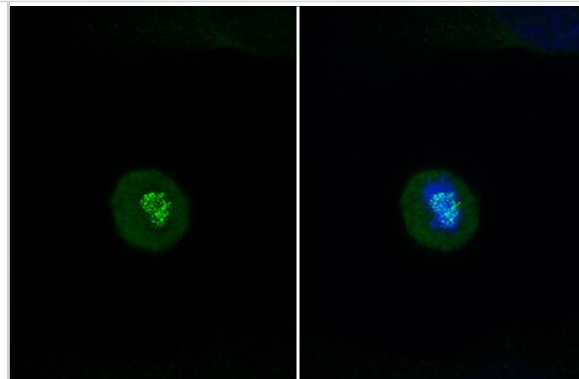
Immunocytochemistry/Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - IF analysis of NDC80 in fixed human cell lines of RPE1, H4, and 42MGBA. Image courtesy of anonymous customer product review.



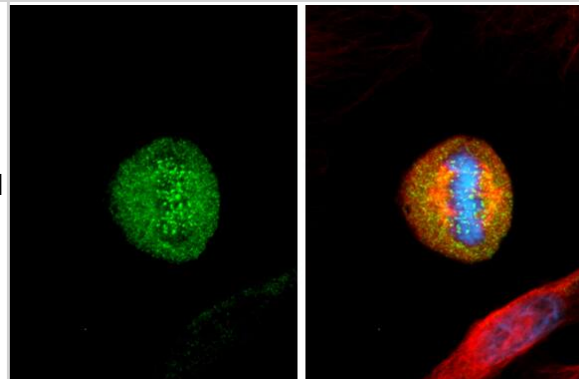
Immunocytochemistry/Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - IF analysis of NDC80 in PTK1 cells. Verified customer review from 1DegreeBio.



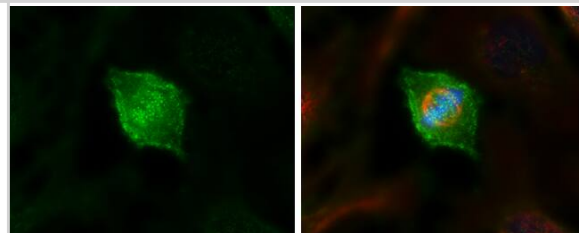
Immunocytochemistry/ Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - NDC80 antibody [9G3.23] detects NDC80 protein at kinetochore by immunofluorescent analysis. Sample: HeLa cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: NDC80 stained by NDC80 antibody [9G3.23] (NB100-338) diluted at 1:500. Blue: Fluoroshield with DAPI .



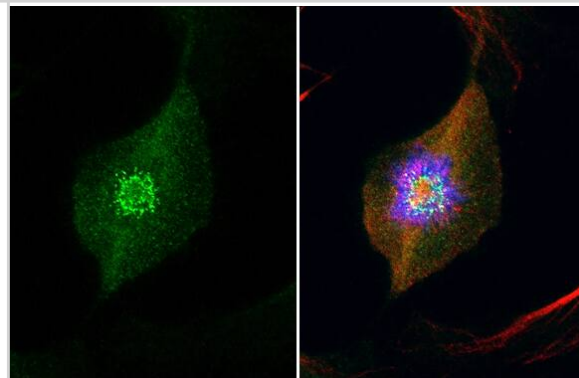
Immunocytochemistry/ Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - NDC80 antibody [9G3.23] detects NDC80 protein at kinetochore by immunofluorescent analysis. Sample: HeLa cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: NDC80 stained by NDC80 antibody [9G3.23] (NB100-338) diluted at 1:1000. Red: alpha Tubulin, a cytoskeleton marker, stained by alpha Tubulin antibody diluted at 1:1000. Blue: Fluoroshield with DAPI .



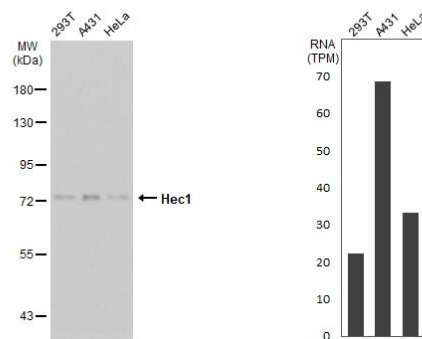
Immunocytochemistry/ Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - NDC80 antibody [9G3.23] detects NDC80 protein at kinetochore by immunofluorescent analysis. Sample: HeLa cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: NDC80 stained by NDC80 antibody [9G3.23] (NB100-338) diluted at 1:500. Red: alpha Tubulin 4a, a cytoskeleton marker, stained by alpha Tubulin 4a antibody diluted at 1:500. Blue: Hoechst 33342 staining.



Immunocytochemistry/ Immunofluorescence: NDC80 Antibody (9G3.23) [NB100-338] - NDC80 antibody [9G3.23] detects NDC80 protein at kinetochore by immunofluorescent analysis. Sample: HeLa cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: NDC80 stained by NDC80 antibody [9G3.23] (NB100-338) diluted at 1:500. Red: beta Tubulin, a cytoskeleton marker, stained by beta Tubulin antibody diluted at 1:1000. Blue: Fluoroshield with DAPI .



Western Blot: NDC80 Antibody (9G3.23) [NB100-338] - Various whole cell extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with Hec1 antibody [9G3.23] diluted at 1:1000. The HRP-conjugated anti-mouse IgG antibody was used to detect the primary antibody. Corresponding RNA expression data for the same cell lines are based on Human Protein Atlas program.



## Publications

Long AF, Udy DB, Dumont S. Hec1 Tail Phosphorylation Differentially Regulates Mammalian Kinetochores Coupling to Polymerizing and Depolymerizing Microtubules *Curr. Biol.* 2017-06-05 [PMID: 28552353]

Roy B, Han SJY, Fontan AN et al. Aurora B phosphorylates Bub1 to promote spindle assembly checkpoint signaling *Current biology : CB* 2021-11-24 [PMID: 34861183]

Neahring L, Cho NH, Dumont S. Opposing motors provide mechanical and functional robustness in the human spindle *Developmental cell* 2021-09-30 [PMID: 34614397]

Uchida KSK, Jo M, Nagasaka K et al. Kinetochores stretching-mediated rapid silencing of the spindle-assembly checkpoint required for failsafe chromosome segregation *Current biology : CB* 2021-02-22 [PMID: 33651990] (ICC/IF, Human)

Wimbish RT, DeLuca KF, Mick JE et al. The Hec1/Ndc80 tail domain is required for force generation at kinetochores, but is dispensable for kinetochores-microtubule attachment formation and Ska complex recruitment *Mol. Biol. Cell* 2020-05-13 [PMID: 32401635]

Wimbish R, DeLuca KF, Mick JE et al. Coordination of NDC80 and Ska complexes at the kinetochores-microtubule interface in human cells *bioRxiv* 2019-10-28 (ICC/IF, Human)

DeLuca KF, Meppelink A, Broad AJ et al. Aurora A kinase phosphorylates Hec1 to regulate metaphase kinetochores-microtubule dynamics *J. Cell Biol.* [PMID: 29187526] (ICC/IF)

Raab M, Sanhaji M, Matthess Y et al. PLK1 has tumor-suppressive potential in APC-truncated colon cancer cells. *Nat Commun.* 2018-03-16 [PMID: 29549256] (ICC/IF, Human)

Dumitru AMG, Rusin SF, Clark AEM et al. Cyclin A/Cdk1 modulates Plk1 activity in prometaphase to regulate kinetochores-microtubule attachment stability *Elife.* 2017-11-20 [PMID: 29154753] (ICC/IF, Human)

Details:  
HEC1 IF antibody used at a dilution of 1:500

Niikura Y, Kitagawa R, Ogi H, Kitagawa K. SGT1-HSP90 complex is required for CENP-A deposition at centromeres *Cell Cycle* 2017-08-17 [PMID: 28816574] (Human)

Tauchman EC, Boehm FJ, DeLuca JG. Stable kinetochores-microtubule attachment is sufficient to silence the spindle assembly checkpoint in human cells. *Nat Commun.* 2015-12-01 [PMID: 26620470] (ICC/IF, WB, Human)

Kleyman M, Kabeche L, Compton DA. STAG2 promotes error correction in mitosis by regulating kinetochores-microtubule attachments. *J. Cell. Sci.* 2014-07-29 [PMID: 25074805] (ICC/IF, Human)

Details:  
Outer kinetochores component Hec1/NDC80 antibody used in ICC-IF on HCT116 and RPE1 cells for measuring centromere stretch (Fig. 1D, supplementary material Fig. S2A)

More publications at <http://www.novusbio.com/NB100-338>



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### **Products Related to NB100-338**

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NB800-PC1	HeLa Whole Cell Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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