

Product Datasheet

Borealin Antibody - BSA Free

NBP1-89951

Unit Size: 0.1 ml

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

www.novusbio.com



technical@novusbio.com

Publications: 4

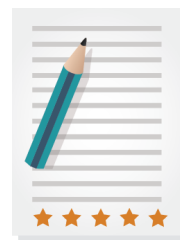
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NBP1-89951

Borealin Antibody - 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	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

Product Description

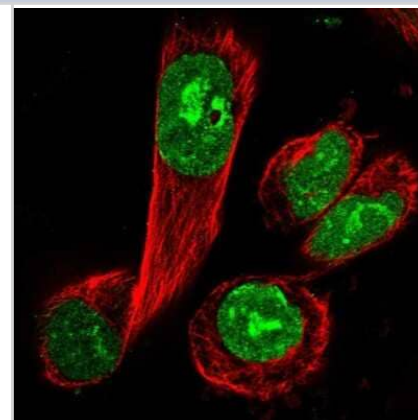
Description	Novus Biologicals Rabbit Borealin Antibody - BSA Free (NBP1-89951) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-Borealin Antibody: Cited in 4 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	55143
Gene Symbol	CDCA8
Species	Human
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: PLKSAKTRKVIQVDEMIVEEEEEENERKNLQTARVKRCPPSKKRTQSIQGKGK GKRSSRANTVTPAVGRLEVSMVKPTPGLTPRFDSR

Product Application Details

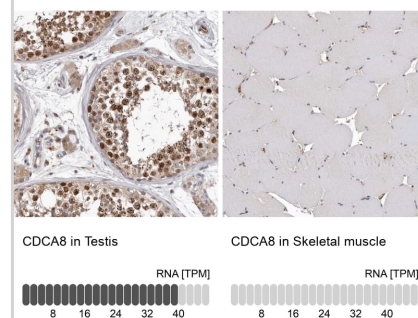
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 0.04 - 0.4 ug/ml, Immunohistochemistry 1:50 - 1:200, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:50-1:200
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF Fixation Permeabilization: Use PFA/Triton X-100.

Images

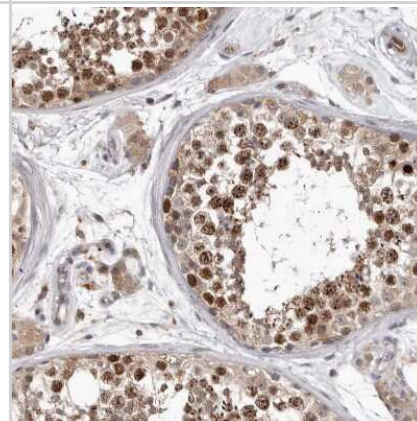
Immunocytochemistry/Immunofluorescence: Borealin Antibody [NBP1-89951] - Staining of human cell line U-251 MG shows localization to nucleus & nucleoli. Antibody staining is shown in green.



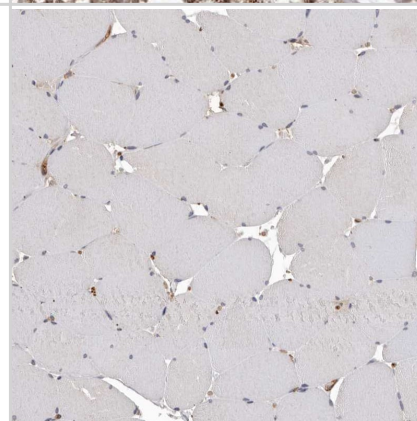
Analysis in human testis and skeletal muscle tissues using NBP1-89951 antibody. Corresponding CDCA8 RNA-seq data are presented for the same tissues.



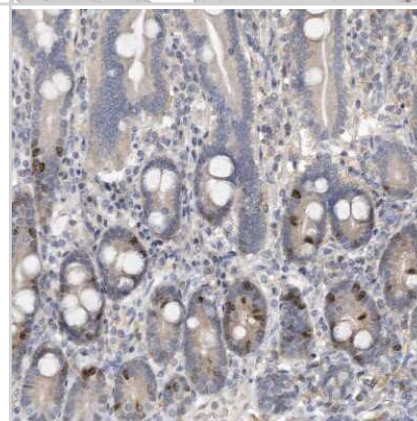
Immunohistochemistry-Paraffin: Borealin Antibody [NBP1-89951] - Staining of human testis shows moderate to strong nuclear positivity in cells in seminiferous ducts.



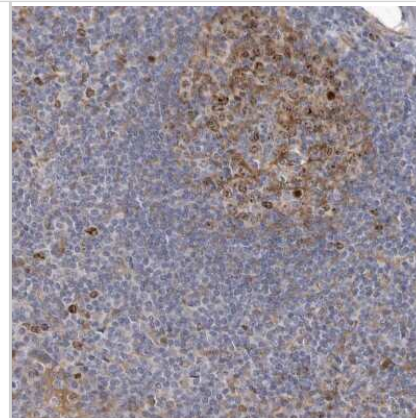
Staining of human skeletal muscle shows no positivity in myocytes as expected.



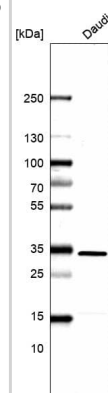
Immunohistochemistry-Paraffin: Borealin Antibody [NBP1-89951] - Staining of human duodenum shows strong nuclear positivity in a subset of glandular cells.



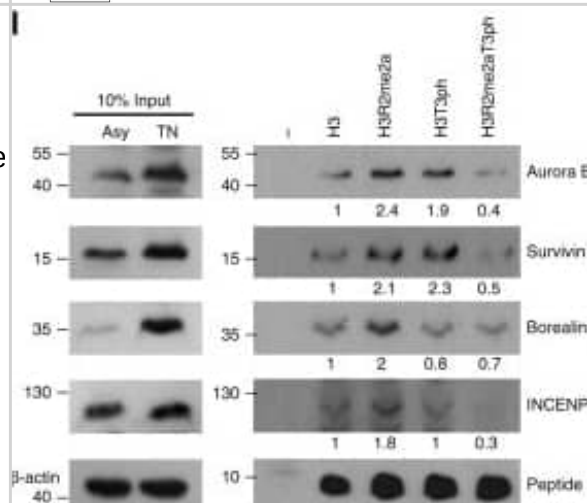
Immunohistochemistry-Paraffin: Borealin Antibody [NBP1-89951] - Staining of human lymphoid tissues shows moderate nuclear positivity in germinal center cells.



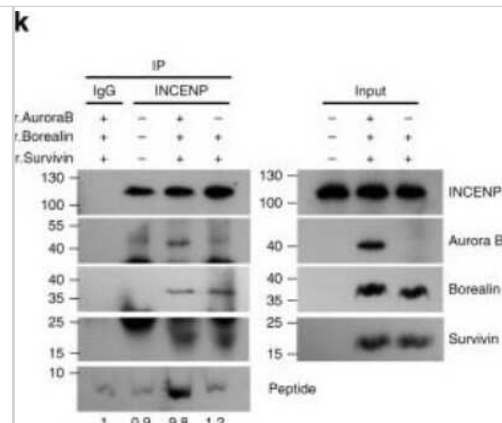
Analysis in control (vector only transfected HEK293T lysate) and CDCA8 over-expression lysate (Co-expressed with a C-terminal myc-DDK tag (~3.1 kDa) in mammalian HEK293T cells).



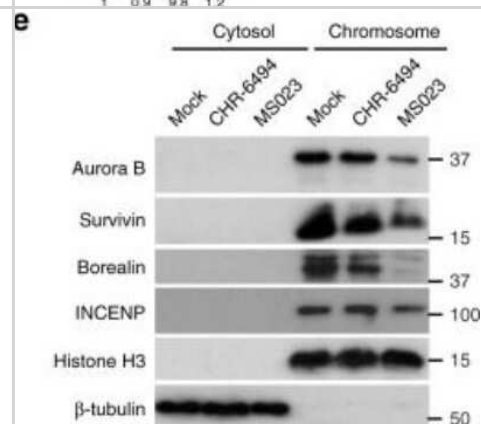
Western Blot: Borealin Antibody [NBP1-89951] - Aurora B preferentially binds to H3R2me2a & recruits CPC components. a The amino acid sequences of modified histone H3 peptides. b In vitro Haspin kinase assay w/ 21-aa peptide. c In vitro Aurora B kinase assay w/ 21-aa peptide for phosphorylation. d In vitro PRMT6 methyltransferase assay. e –h The cells treated w/ siPRMT6, PRMT6 inhibitor MS023, or the Haspin kinase inhibitor CHR-6494. The intensities of H3R2me2a (f) & H3T3ph (h) in chromosome arm & centromere analyzed by IF microscopy of nocodazole-arrested HeLa chromosome spreads & plotted (n = 100 chromosomes from three independent experiments). i After transfection of indicated plasmids, HeLa cells treated w/ a Haspin kinase inhibitor, CHR-6494, for 5 h & the intensity of CPC components analyzed for 100 centromeres from three independent experiments. j Recombinant CPC proteins incubated w/ biotinylated histone peptides & pulled down w/ streptavidin-agarose beads, & the binding visualized by immunoblotting. k Lysates of TN-arrested Aurora B-depleted cells supplemented w/ recombinant Survivin & Borealin proteins w/ or w/out recombinant Aurora B protein. The lysates incubated w/ antibodies against INCENP & the H3R2me2a peptide, & pulldown conducted w/ agarose A beads. The binding visualized by immunoblotting. The asterisk denotes the light chain of antibodies. l Lysates of TN-arrested mitotic HeLa cells incubated w/ biotinylated histone peptides & pulled down w/ streptavidin-agarose beads, & the binding visualized by immunoblotting. Relative band intensities of band measured w/ image processing software (Image Studio ver5.0). Error bars, SEMs. Scale bars, 5 μ m. Source data are provided as a Source Data file. (Student's t-test *p < 0.01). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32001712>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



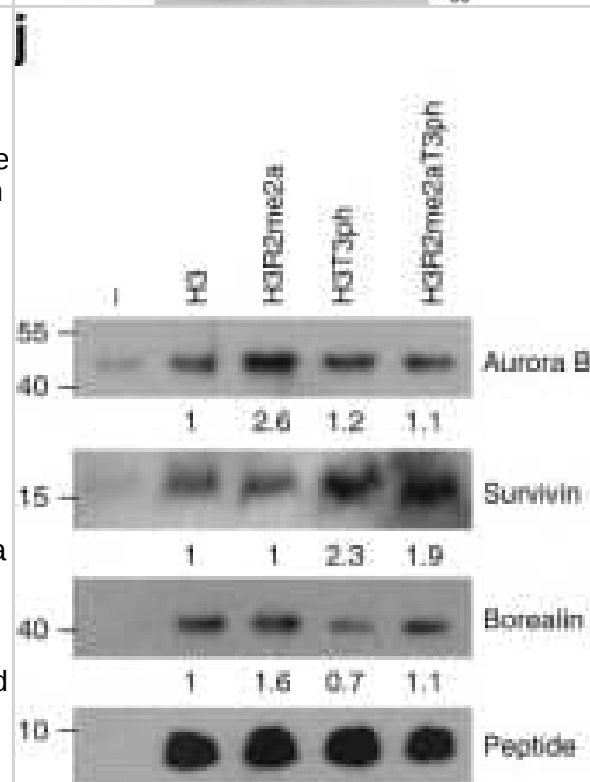
Borealin-Antibody-Western-Blot-NBP1-89951-img0018.jpg



Borealin-Antibody-Western-Blot-NBP1-89951-img0017.jpg



Western Blot: Borealin Antibody [NBP1-89951] - Aurora B preferentially binds to H3R2me2a & recruits CPC components. a The amino acid sequences of modified histone H3 peptides. b In vitro Haspin kinase assay w/ 21-aa peptide. c In vitro Aurora B kinase assay w/ 21-aa peptide for phosphorylation. d In vitro PRMT6 methyltransferase assay. e –h The cells treated w/ siPRMT6, PRMT6 inhibitor MS023, or the Haspin kinase inhibitor CHR-6494. The intensities of H3R2me2a (f) & H3T3ph (h) in chromosome arm & centromere analyzed by IF microscopy of nocodazole-arrested HeLa chromosome spreads & plotted (n = 100 chromosomes from three independent experiments). i After transfection of indicated plasmids, HeLa cells treated w/ a Haspin kinase inhibitor, CHR-6494, for 5 h & the intensity of CPC components analyzed for 100 centromeres from three independent experiments. j Recombinant CPC proteins incubated w/ biotinylated histone peptides & pulled down w/ streptavidin-agarose beads, & the binding visualized by immunoblotting. k Lysates of TN-arrested Aurora B-depleted cells supplemented w/ recombinant Survivin & Borealin proteins w/ or w/out recombinant Aurora B protein. The lysates incubated w/ antibodies against INCENP & the H3R2me2a peptide, & pulldown conducted w/ agarose A beads. The binding visualized by immunoblotting. The asterisk denotes the light chain of antibodies. l Lysates of TN-arrested mitotic HeLa cells incubated w/ biotinylated histone peptides & pulled down w/ streptavidin-agarose beads, & the binding visualized by immunoblotting. Relative band intensities of band measured w/ image processing software (Image Studio ver5.0). Error bars, SEMs. Scale bars, 5 μm. Source data are provided as a Source Data file. (Student's t-test *p < 0.01). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32001712>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Xianghua Zhang, Ji Eun Park, Eun Ho Kim, Jihee Hong, Ki-Tae Hwang, Young A. Kim, Chang-Young Jang Wip1 controls the translocation of the chromosomal passenger complex to the central spindle for faithful mitotic exit Cellular and Molecular Life Sciences: CMLS 2021-03-01 [PMID: 33067654]

Hong J, Gwon D, Jang C Ginsenoside Rg1 suppresses cancer cell proliferation through perturbing mitotic progression J Ginseng Res 2022-05-23 [PMID: 35600766]

Park M, Hwang JW, Cho Y et al. A novel synthetic microtubule inhibitor exerts antiproliferative effects in multidrug resistant cancer cells and cancer stem cells Scientific reports 2021-05-24 [PMID: 34031528] (Human)

Kim S, Kim NH, Park JE et al. PRMT6-mediated H3R2me2a guides Aurora B to chromosome arms for proper chromosome segregation Nat Commun 2020-01-30 [PMID: 32001712] (WB, ICC/IF, Human)





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Products Related to NBP1-89951

NBP1-89951PEP	Borealin Recombinant Protein Antigen
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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