abcam

ab251316

Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR17170
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Rat, Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information NCAPH2

Function	Regulatory subunit of the condensin-2 complex, a complex that seems to provide chromosomes with an additional level of organization and rigidity and in establishing mitotic chromosome architecture (PubMed:14532007). May promote the resolution of double-strand DNA catenanes (intertwines) between sister chromatids. Condensin-mediated compaction likely increases tension in catenated sister chromatids, providing directionality for type II topoisomerase-mediated strand exchanges toward chromatid decatenation. Required for decatenation of chromatin bridges at anaphase. Early in neurogenesis, may play an essential role to ensure accurate mitotic chromosome condensation in neuron stem cells, ultimately affecting neuron pool and cortex size (By similarity). Seems to have lineage-specific role in T-cell development (PubMed:14532007).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251316 is the carrier-free version of ab200659.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	NCAPH2 also known as non-SMC condensin II complex subunit H2 plays an important role in chromosome condensation. It is a part of the condensin II complex and contributes to the structuring and stabilization of chromatin. NCAPH2 has a mass of approximately 99 kDa and is expressed broadly in various tissues including embryonic tissues and adult organs. Its functional role is important in processes that require chromatin reorganization.
Biological function summary	NCAPH2 functions as an important component of the condensin II complex which facilitates proper chromosome segregation during cell division. The protein through its interaction with other condensin subunits C and A oversees the maintenance of chromosome architecture. It also influences mitotic progression by ensuring the accurate separation of sister chromatids. Research shows

	NCAPH2's involvement in maintaining genome stability highlighting its biological significance.
Pathways	NCAPH2 participates in important cellular pathways such as mitotic chromosome condensation and DNA repair mechanisms. Within these pathways NCAPH2 interacts closely with proteins like SMC2 and SMC4 which form the core of the condensin complexes. Correct functioning of these pathways ensures the integrity of genetic material during cell division preventing aneuploidy and other chromosomal abnormalities.
Associated diseases and disorders	NCAPH2 has been linked to various conditions including cancer and developmental disorders. Its dysregulation has associations with certain cancers due to its role in maintaining genomic stability where its aberrant expression may lead to improper cell division and tumorigenesis. Additionally connections to Kleefstra syndrome where a disruption impacts chromatin organization suggest NCAPH2's interactions with other chromatin-modifying proteins including histone deacetylases.

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

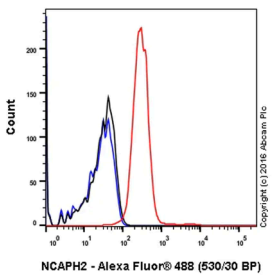
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images



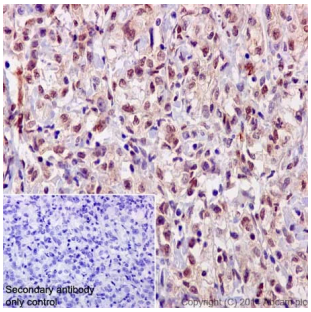
Flow Cytometry (Intracellular) - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

NCAPH2 Flow Cytometry (Intracellular) staining using rabbit Anti-NCAPH2 antibody

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
ab200659 staining NCAPH2 in Jurkat (human acute T cell leukemia) cells by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/240. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isoytype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

NCAPH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NCAPH2 antibody

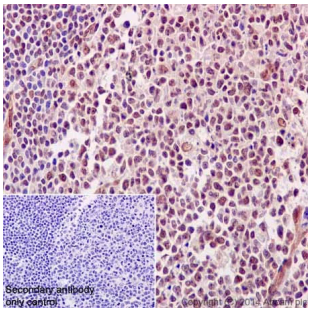
This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.

Nuclear and weakly cytoplasmic staining on Human hepatocellular carcinoma is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

NCAPH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NCAPH2 antibody

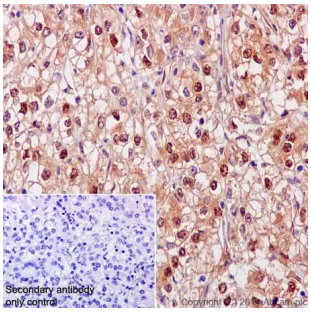
This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.

Nuclear and weakly cytoplasm staining on Human tonsil tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

NCAPH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NCAPH2 antibody

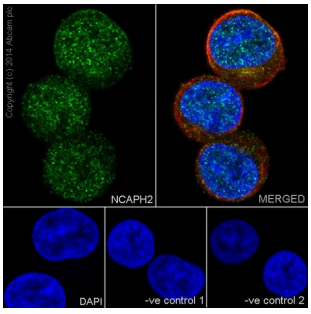
This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human clear cell carcinoma of kidney tissue labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.

Nuclear and cytoplasm staining on Human clear cell carcinoma of kidney tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

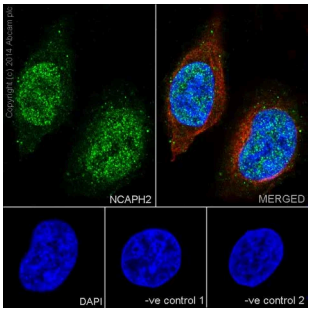
NCAPH2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NCAPH2 antibody

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).

Nuclear and weakly cytoplasm staining on Jurkat cell line is observed.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab200659 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

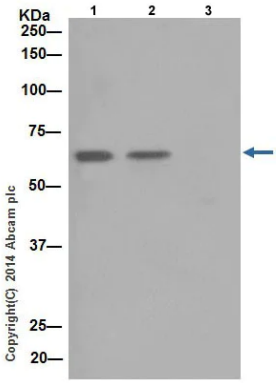
NCAPH2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NCAPH2 antibody

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).

Nuclear and weakly cytoplasm staining on HeLa cell line is observed.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab200659 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunoprecipitation - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
NCAPH2 was immunoprecipitated from 1mg of HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate with ab200659 at 1/60 dilution.

Western blot was performed from the immunoprecipitate using ab200659 at 1/1000 dilution.

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: HeLa whole cell lysate 10 µg (Input).

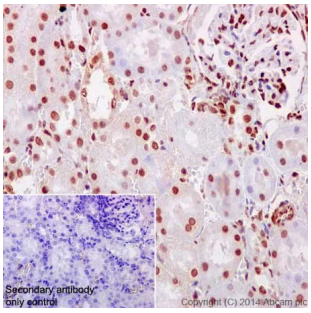
Lane 2: ab200659 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab200659 in HeLa whole cell extract.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-NCAPH2 antibody [EPR17170] (ab200659)

Predicted band size: 68 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

NCAPH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NCAPH2 antibody

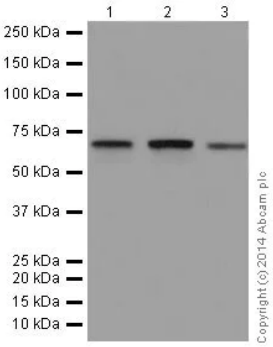
This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling NCAPH2 with ab200659 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.

Nuclear and weakly cytoplasmic staining on rat kidney is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NCAPH2 antibody [EPR17170] (ab200659) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
HepG2 (Human liver hepatocellular carcinoma) whole cell lysate at 20 µg

Lane 3:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

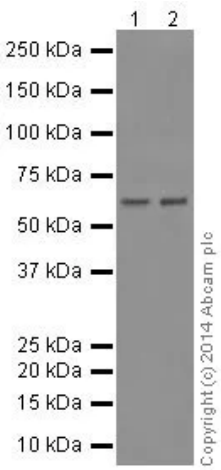
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 68 kDa

Observed band size: 68 kDa

Exposure time: 15s



Western blot - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NCAPH2 antibody [EPR17170] (ab200659) at 1/1000 dilution

Lane 1:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 2:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

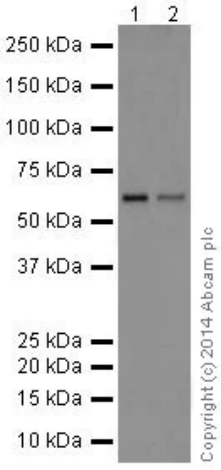
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 68 kDa

Observed band size: 68 kDa

Exposure time: 15s



Western blot - Anti-NCAPH2 antibody [EPR17170] - BSA and Azide free (ab251316)

This data was developed using ab200659, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NCAPH2 antibody [EPR17170] (ab200659) at 1/1000 dilution

Lane 1:
Mouse heart lysate at 10 µg

Lane 2:
Rat heart lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 68 kDa

Observed band size: 68 kDa

Exposure time: 3min

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.