abcam

ab315247

# Anti-NAP1L1 antibody [RM1101] - 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** | Multiclonal |
| **Immunogens** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | RM1101 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.986 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### WB

#### Tested

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

## IHC-P

**Tested**

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

**Tested**

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

**Tested**

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IP

**Tested**

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information NAP1L1

| | |
|---|---|
| **Function** | Histone chaperone that plays a role in the nuclear import of H2A-H2B and nucleosome assembly (PubMed:20002496, PubMed:21211722, PubMed:26841755). Also participates in several important DNA repair mechanisms: greatly enhances ERCC6-mediated chromatin remodeling which is essential for transcription-coupled nucleotide excision DNA repair (PubMed:28369616). Also stimulates homologous recombination (HR) by RAD51 and RAD54 which is essential in mitotic DNA double strand break (DSB) repair (PubMed:24798879). Plays a key role in the regulation of embryonic neurogenesis (By similarity). Promotes the proliferation of neural progenitors and inhibits neuronal differentiation during cortical development (By similarity). Regulates neurogenesis via the modulation of RASSF10; regulates RASSF10 expression by promoting SETD1A-mediated H3K4 methylation at the RASSF10 promoter (By similarity). (Microbial infection) Positively regulates Epstein-Barr virus reactivation in epithelial cells through the induction of viral BZLF1 expression. (Microbial infection) Together with human herpesvirus 8 protein LANA1, assists the proper assembly of the nucleosome on the replicated viral DNA. |

## Storage

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

## Notes

ab315247 is the carrier-free version of ab315246.

**What are recombinant multiclonals?**

Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

**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.

**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** | NAP1L1 also known as Nucleosome Assembly Protein 1-Like 1 plays a role mechanically by assisting in nucleosome assembly. This protein has a mass of about 45 kDa and is expressed in various tissues including the brain and liver. NAP1L1 moves within the nucleus and cytoplasm which allows interaction with DNA and other proteins involved in chromatin organization. |
| **Biological function summary** | NAP1L1 contributes to chromatin remodeling by facilitating the assembly and disassembly of nucleosomes. NAP1L1 forms part of a complex that modulates chromatin structure and function influencing gene expression and DNA replication. It interacts with histones contributing to the deposition and removal of histones H2A and H2B making it essential for proper cell cycle progression and regulation. |
| **Pathways** | NAP1L1 acts in key signaling interconnected with chromatin modification and cell cycle control. It participates in the histone chaperone pathways influencing chromatin structure dynamics. NAP1L1 associates with proteins like histone H2A-H2B and the chromatin assembly factor CAF-1. These proteins collectively maintain chromatin integrity and regulation during DNA replication and repair processes. |
| **Associated diseases and disorders** | NAP1L1 has links to certain cancers and neurological disorders. Increased levels of NAP1L1 are observable in some tumor types suggesting a role in cancer progression. In neurological contexts alterations in this protein are noted in conditions like Alzheimer's disease where chromatin misregulation is apparent. Connections with other proteins such as histone variants may further implicate NAP1L1 in these pathological states. |

## 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.

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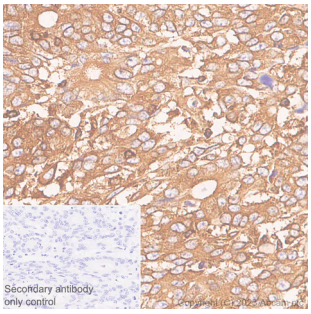
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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## 15 product images




### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

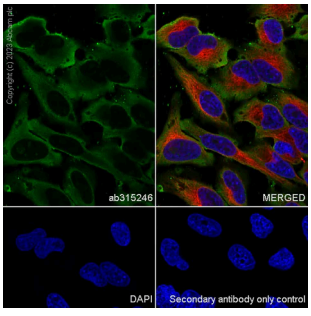
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling NAP1L1 with ab315246 at 1/5000 (0.0958 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human colon cancer. The section was incubated with ab315246 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins

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### Immunocytochemistry/ Immunofluorescence - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

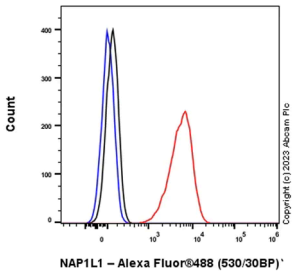
This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling NAP1L1 with ab315246 at 1/100 (4.79 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in HeLa cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.

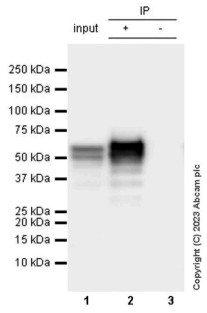



## Flow Cytometry (Intracellular) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling NAP1L1 with ab315246 at 1/500 dilution (0.1 ug)/Red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.




## Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

NAP1L1 was immunoprecipitated from 0.35 mg HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate with ab315246 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315246 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate

Lane 2: ab315246 IP in HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315246 in HeLa whole cell lysate

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

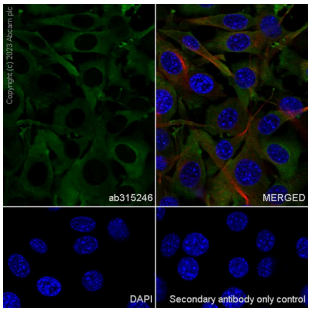
All lanes:
Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/30 dilution

All lanes:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 6s




## Immunocytochemistry/ Immunofluorescence - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

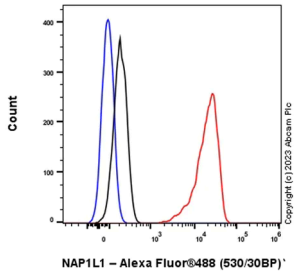
This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 (mouse embryonic fibroblast cell) cells labelling NAP1L1 with ab315246 at 1/100 (4.79 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in NIH/3T3 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.

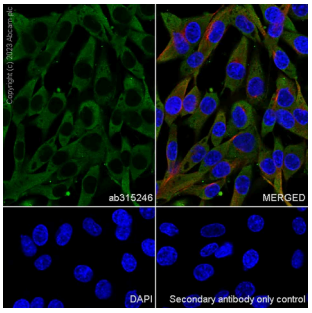



## Flow Cytometry (Intracellular) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling NAP1L1 with ab315246 at 1/500 dilution (0.1 ug, Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.




## Immunocytochemistry/ Immunofluorescence - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

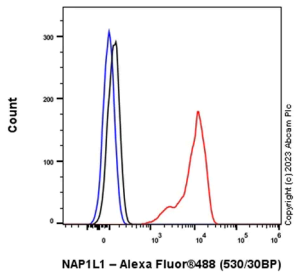
This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized C6 (rat glial tumor glial cell) cells labelling NAP1L1 with ab315246 at 1/100 (4.79 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in C6 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.

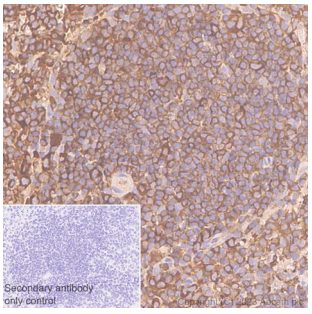



## Flow Cytometry (Intracellular) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized C6 (rat glial tumor glial cell) cells labelling NAP1L1 with ab315246 at 1/500 dilution (0.1 ug, Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

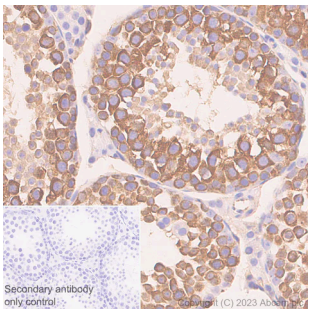
This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling NAP1L1 with ab315246 at 1/5000 (0.0958 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on rat spleen. The section was incubated with ab315246 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

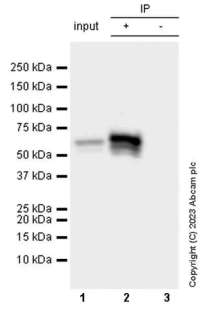
This data was developed using ab315246, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling NAP1L1 with ab315246 at 1/5000 (0.0958 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse testis. The section was incubated with ab315246 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins




## Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

NAP1L1 was immunoprecipitated from 0.35 mg C6 (rat glial tumor glial cell) whole cell lysate with ab315246 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315246 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: C6 (rat glial tumor glial cell) whole cell lysate

Lane 2: ab315246 IP in C6 (rat glial tumor glial cell) whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315246 in C6 whole cell lysate

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

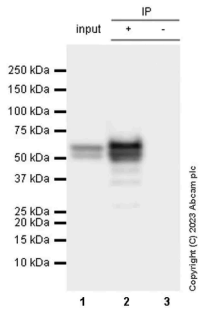
All lanes:
Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/30 dilution

All lanes:
C6 (rat glial tumor glial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 8s




## Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

NAP1L1 was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab315246 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315246 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lane 2: ab315246 IP in NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315246 in NIH/3T3 whole cell lysate

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

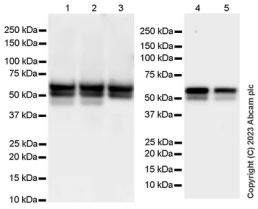
All lanes:
Immunoprecipitation - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/30 dilution

All lanes:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 6s




## Western blot - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

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

The expression profile is consistent with what has been described in the literature (PMID:36499021 and PMID:20002496 ).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation(Lanes 1-3).

Exposure time: Lanes 1-3: 4 seconds; Lanes 5-6: 15 seconds

All lanes:
Western blot - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 4:

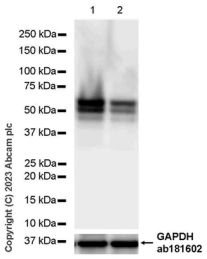
C6 (rat glial tumor glial cell) whole cell lysate at 20 µg

Lane 5:
NR8383 (rat alveolar macrophage) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 43-45 kDa




## Western blot - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

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

The expression profile is consistent with what has been described in the literature (PMID:36499021 and PMID:20002496 ).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

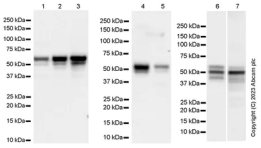
Lane 2:
293T transfected with siRNA specifically targeting NAP1L1 whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 43-45 kDa, 36 kDa

Exposure time: 4s



## Western blot - Anti-NAP1L1 antibody [RM1101] - BSA and Azide free (ab315247)

This data was developed using ab315246, the same antibody clone in a different buffer formulation.

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

The expression profile is consistent with what has been described in the literature (PMID:36499021 and PMID:20002496 ).

Exposure time: Lanes 1-5: 6 seconds; Lanes 6: 15 seconds; Lanes 7: 59 seconds

All lanes:
Western blot - Anti-NAP1L1 antibody [RM1101] (ab315246) at 1/1000 dilution

Lane 1:
Mouse liver tissue lysate at 20 µg

Lane 2:
Mouse testis tissue lysate at 20 µg

Lane 3:
Mouse spleen tissue lysate at 20 µg

Lane 4:
Rat testis tissue lysate at 20 µg

Lane 5:
Rat spleen tissue lysate at 20 µg

Lane 6:
Human cerebellum tissue lysate at 10 µg

Lane 7:
Human spleen tissue lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 43-45 kDa

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