abcam

ab232392

Anti-WTAP antibody [EPR18744] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR18744
Purification technique	Affinity purification Protein A
Concentration	1.035 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information WTAP

Function	Associated component of the WMM complex, a complex that mediates N6-methyladenosine (m6A) methylation of RNAs, a modification that plays a role in the efficiency of mRNA splicing and RNA processing (PubMed:29507755). Required for accumulation of METTL3 and METTL14 to nuclear speckle (PubMed:24316715, PubMed:24407421, PubMed:24981863). Acts as a mRNA splicing regulator (PubMed:12444081). Regulates G2/M cell-cycle transition by binding to the 3' UTR of CCNA2, which enhances its stability (PubMed:17088532). Impairs WT1 DNA-binding ability and inhibits expression of WT1 target genes (PubMed:17095724).

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

ab232392 is the carrier-free version of ab195380.

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	WTAP also known as Wilms tumor 1-associated protein is a core component of the writer complex that catalyzes N6-methyladenosine (m6A) methylation on mRNA. With a molecular mass of approximately 39 kDa WTAP localizes almost ubiquitously in human tissues but shows higher expression in liver and kidney

	cells. This protein assists in the regulation of mRNA splicing and stability functioning as an adapter for RNA binding proteins.
Biological function summary	This protein plays a critical role in post-transcriptional gene regulation by being part of the m6A methyltransferase complex which includes other important proteins like METTL3 and METTL14. WTAP does not bind RNA directly but helps its partners achieve target specificity during gene expression processes. The presence of WTAP within the complex stabilizes and coordinates the activity of the entire methyltransferase assembly.
Pathways	The m6A methylation WTAP facilitates affects various pathways including mRNA splicing and degradation. This process intricately connects WTAP to the regulation of the JAK-STAT signaling pathway where its activity influences inflammatory responses and cell proliferation. Additionally WTAP has ties to the Wnt/β-catenin pathway collaborating with proteins like METTL3 to regulate gene expression involved in cell fate determination and embryogenesis.
Associated diseases and disorders	Research shows WTAP has connections to various cancers such as hepatocellular carcinoma due to its role in mRNA processing and stability. This association often involves its interaction with other oncogenic proteins like METTL3 leading to aberrant gene expression patterns. WTAP also has relevance in acute myeloid leukemia where it influences mRNA maturation and impacts cell differentiation and proliferation.

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

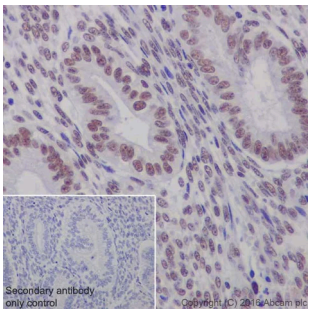
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

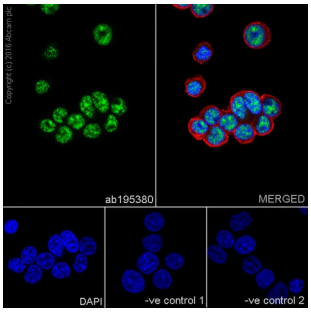


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

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

Immunohistochemical analysis of paraffin-embedded human endometrium tissue labeling WTAP with ab195380 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on human endometrium 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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).



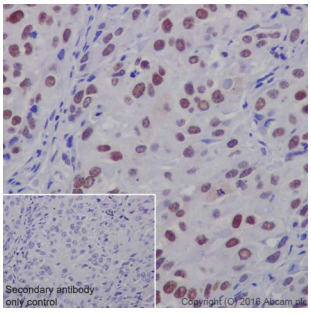
Immunocytochemistry/ Immunofluorescence - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

WTAP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-WTAP antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cell line from peripheral blood) cells labeling WTAP with ab195380 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on Jurkat cell line. The nuclear counter stain is DAPI (blue).
Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab195380 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).



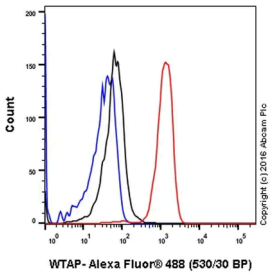
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

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

Immunohistochemical analysis of paraffin-embedded human liver cancer tissue labeling WTAP with ab195380 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on human liver cancer 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.

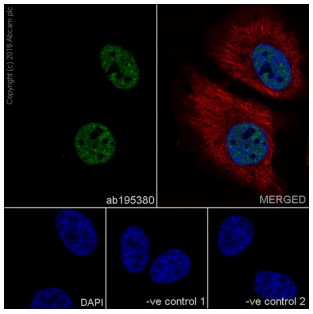
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).



Flow Cytometry (Intracellular) - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed Jurkat (Human T cell leukemia cell line from peripheral blood) cells labeling WTAP with ab195380 at 1/600 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).



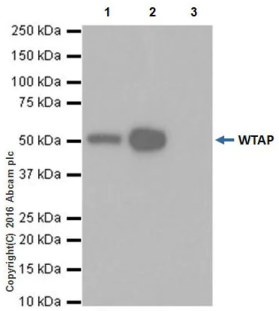
Immunocytochemistry/ Immunofluorescence - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

WTAP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-WTAP antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling WTAP with ab195380 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on HeLa cell line. The nuclear counter stain is DAPI (blue).
Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab195380 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).



Immunoprecipitation - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

WTAP was immunoprecipitated from 0.35 mg of Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate with ab195380 at 1/40 dilution. Western blot was performed from the immunoprecipitate using ab195380 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: Jurkat whole cell lysate 10µg (Input).

Lane 2: ab195380 IP in Jurkat whole cell lysate.

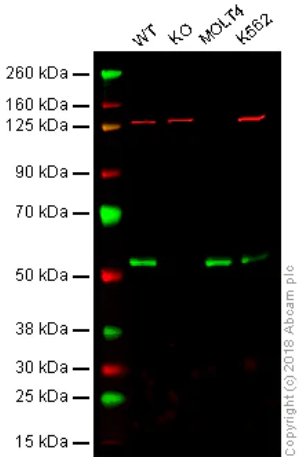
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab195380 in Jurkat whole cell lysate.

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

Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).
All lanes:
Immunoprecipitation - Anti-WTAP antibody [EPR18744] (ab195380)

Predicted band size: 44 kDa



Western blot - Anti-WTAP antibody [EPR18744] - BSA and Azide free (ab232392)

WTAP Western blot staining using rabbit Anti-WTAP antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: WTAP knockout HAP1 whole cell lysate (20 µg)
Lane 3: MOLT-4 whole cell lysate (20 µg)
Lane 4: K562 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab195380 observed at 50 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab195380 was shown to specifically react with WTAP in wild-type HAP1 cells as signal was lost in WTAP knockout cells. Wild-type and WTAP knockout samples were subjected to SDS-PAGE. ab195380 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab195380).

All lanes:
Western blot - Anti-WTAP antibody [EPR18744] (ab195380)

Predicted band size: 44 kDa

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