abcam

ab181990

Anti-SET/TAF-I antibody [EPR12973]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12973
Purification technique	Affinity purification Protein A
Concentration	0.11 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/100000
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human

Dilution info	1/1000
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	1/250
Notes	-

Species	Human
Dilution info	1/250
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information SET

Function Multitasking protein, involved in apoptosis, transcription, nucleosome assembly and histone chaperoning. Isoform 2 anti-apoptotic activity is mediated by inhibition of the GZMA-activated DNase, NME1. In the course of cytotoxic T-lymphocyte (CTL)-induced apoptosis, GZMA cleaves SET, disrupting its binding to NME1 and releasing NME1 inhibition. Isoform 1 and isoform 2 are potent inhibitors of protein phosphatase 2A. Isoform 1 and isoform 2 inhibit EP300/CREBBP and PCAF-mediated acetylation of histones (HAT) and nucleosomes, most probably by masking the accessibility of lysines of histones to the acetylases. The predominant target for inhibition is histone H4. HAT inhibition leads to silencing of HAT-dependent transcription and prevents active demethylation of DNA. Both isoforms stimulate DNA replication of the adenovirus genome complexed with viral core proteins; however, isoform 2 specific activity is higher.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

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

Activity summary	SET/TAF-I also known as Inhibitor of Protein Phosphatase 2A (I2PP2A) is a multifunctional protein with an approximate mass of 39 kDa. It is ubiquitously expressed in various human tissues including the brain liver and testis. SET/TAF-I plays a role in chromatin remodeling and gene transcription regulation by inhibiting protein phosphatase 2A (PP2A) activity. The protein interacts with nucleosome assembly and in chromatin sliding affecting the overall structure and function of chromosomal material.
Biological function summary	In the context of cellular processes SET/TAF-I functions as a histone chaperone and is a part of the nucleosome assembly complex. This protein is involved in nucleosome disassembly and assembly during DNA replication and repair and it modulates transcriptional access for various transcription factors. It regulates the acetylation of histones influencing gene expression levels. The SET/TAF-I also participates in apoptosis and autophagy demonstrating its versatility in cellular control mechanisms.
Pathways	Studies show that SET/TAF-I engages in the MAPK/ERK signaling pathway which is critical for cell cycle progression and proliferation. It is linked with other proteins such as HMGN proteins and histone deacetylases playing a substantial role in chromatin dynamics and genomic stability. Furthermore SET/TAF-I is central to the

	signaling pathway that maintains normal cellular functions and responds to stress signals like oxidative stress demonstrating its importance in normal cell regulation.
Associated diseases and disorders	Abnormalities in SET/TAF-I levels link to Alzheimer's disease and acute myeloid leukemia. In Alzheimer's the protein accumulation leads to tau hyperphosphorylation an important feature of neurodegeneration influencing PP2A's role in phosphatase activity. In acute myeloid leukemia SET/TAF-I dysregulation results in altered cell proliferation and survival signaling implicating proteins like BCL-2 and downstream apoptotic regulators. This demonstrates the protein's involvement in both neurological disorders and malignancies highlighting its broader clinical significance.

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

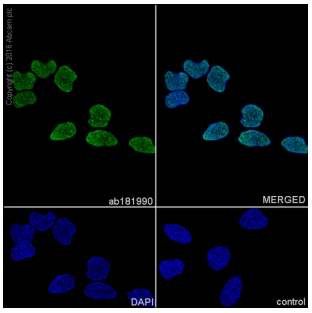
We do not recommend this combination. It is not covered by our product promise.

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.

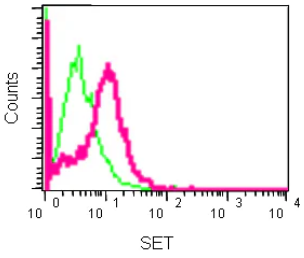
7 product images



Immunocytochemistry/ Immunofluorescence - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

SET/TAF-I Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SET/TAF-I antibody

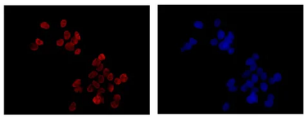
Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling SET/TAF-I with Purified ab181990 at 1/500 dilution (5 µg/ml). Cells were fixed with 4% PFA and permeabilized with 0.1% tritonX-100. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) at 1/1000 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI. PBS was used instead of the primary antibody as the negative control.



Flow Cytometry (Intracellular) - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

SET/TAF-I Flow Cytometry (Intracellular) staining using rabbit Anti-SET/TAF-I antibody

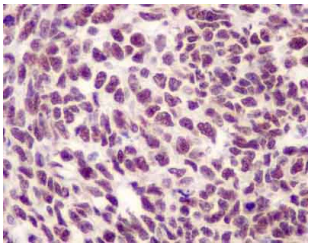
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed Hela cells labeling SET/TAF-I using ab181990at a 1/10 dilution, or a rabbit monoclonal IgG isotype control. Secondary antibody used was goat anti rabbit IgG (FITC) at a 1/150 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

SET/TAF-I Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SET/TAF-I antibody

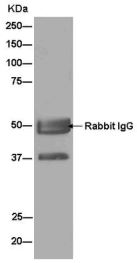
Immunofluorescent analysis of 4% paraformaldehyde fixed HepG2 cell line staining SET/TAF-I using ab181990 at 1/1000 dilution. A Dylight 555 conjugated Goat anti rabbit IgG at 1/200 dilution was used for secondary antibody detection. Counter stain: Dapi.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

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

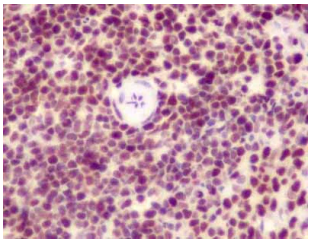
Immunohistochemical analysis of paraffin-embedded Human nephroblastoma tissue labeling SET/TAF-I with ab181990 at a 1/250 dilution. Prediluted (ready to use) HRP Polymer for Rabbit IgG was used as a secondary antibody. Counter stain: Hematoxylin
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

Immunoprecipitation of Jurkat cell lysate labeling SET/TAF-I using ab181990 at a 1/30 dilution (lane 1). A goat anti-rabbit IgG, (H+L), peroxidase conjugated secondary antibody was used at a dilution of 1/1000. Blocking/dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

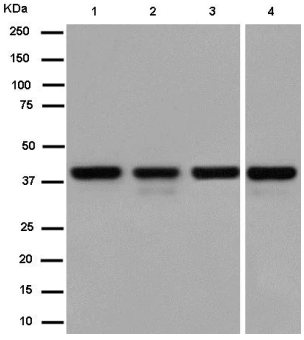
Predicted band size: 33 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

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

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling SET/TAF-I with ab181990 at a 1/250 dilution. Prediluted (ready to use) HRP Polymer for Rabbit IgG was used as a secondary antibody. Counter stain: Hematoxylin
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Western blot - Anti-SET/TAF-I antibody [EPR12973] (ab181990)

SET/TAF-I Western blot staining using rabbit Anti-SET/TAF-I antibody

Blocking/dilution buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-SET/TAF-I antibody [EPR12973] (ab181990) at 1/100000 dilution

Lane 1:
Jurkat cell lysate at 20 µg

Lane 2:
293T cell lysate at 20 µg

Lane 3:
Hela cell lysate at 20 µg

Lane 4:
HepG2 cell lysate at 20 µg

Secondary

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

Predicted band size: 33 kDa

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