abcam

ab249681

Anti-TBP-1 antibody [EPR12152] - 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	EPR12152
Purification technique	Affinity purification
Concentration	0.958 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PSMC3

Function	Component of the 26S proteasome, a multiprotein complex involved in the ATP-dependent degradation of ubiquitinated proteins. This complex plays a key role in the maintenance of protein homeostasis by removing misfolded or damaged proteins, which could impair cellular functions, and by removing proteins whose functions are no longer required. Therefore, the proteasome participates in numerous cellular processes, including cell cycle progression, apoptosis, or DNA damage repair. PSMC3 belongs to the heterohexameric ring of AAA (ATPases associated with diverse cellular activities) proteins that unfolds ubiquitinated

target proteins that are concurrently translocated into a proteolytic chamber and degraded into peptides.

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

ab249681 is the carrier-free version of ab171969.

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	TBP-1 also called Tat-binding protein-1 is a critical player in the regulation of protein degradation. It is a component of the 19S regulatory particle of the 26S proteasome. The molecular mass of TBP-1 is approximately 56 kDa. Expression of TBP-1 is noted in various tissues reflecting its essential role in cellular processes. As a proteasome member it contributes to the recognition and unfolding of ubiquitinated proteins designated for degradation.
Biological function summary	TBP-1 functions as an ATPase in the 26S proteasome complex aiding in the breakdown of proteins. This breakdown is important for maintaining protein homeostasis by removing misfolded or damaged proteins. In the proteasome complex TBP-1 collaborates with other ATPases to control access of substrates to the proteolytic core. This role ensures a regulated protein turnover which is important for cell cycle progression and stress responses.
Pathways	TBP-1 serves a significant role in the ubiquitin-proteasome pathway and the regulation of transcription. In the ubiquitin-proteasome pathway it collaborates with other regulatory subunits to modulate proteasomal activity. TBP-1 is associated with proteins like Rpt5 and Rpt1 which are also ATPases in the 19S regulatory particle coordinating the denaturation and translocation of proteins into the 20S core particle for degradation.
Associated diseases and disorders	TBP-1's malfunction or altered expression can contribute to neurodegenerative diseases such as Parkinson's disease and Alzheimer's disease. In these conditions improper protein degradation leads to accumulation of toxic protein aggregates. Through these pathways TBP-1 interacts with proteins like alpha-synuclein in Parkinson's disease where its dysfunction exacerbates aggregation. Understanding TBP-1's role offers insights for therapeutic approaches aimed at modulating the proteasomal degradation machinery in such diseases.

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

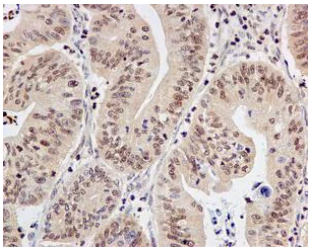
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images

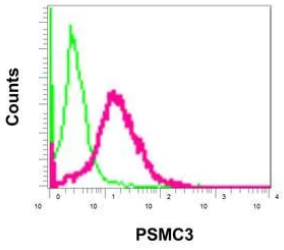


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

TBP-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TBP-1 antibody

This data was developed using ab171969, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue, labeling TBP-1 using ab171969 at a 1/50 dilution.

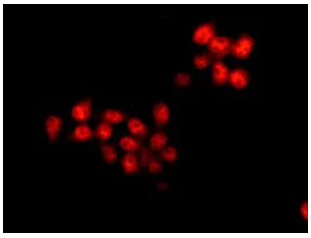
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

TBP-1 Flow Cytometry (Intracellular) staining using rabbit Anti-TBP-1 antibody

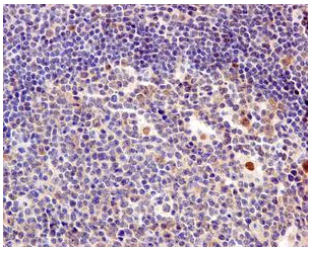
This data was developed using ab171969, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized 293 cells, labeling TBP-1 using ab171969 at a 1/10 dilution (red) or a rabbit IgG negative control (green).



Immunocytochemistry/ Immunofluorescence - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

TBP-1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TBP-1 antibody

This data was developed using ab171969, the same antibody clone in a different buffer formulation.
Immunofluorescence analysis of 293 cells labeling TBP-1 using ab171969 at a 1/250 dilution.

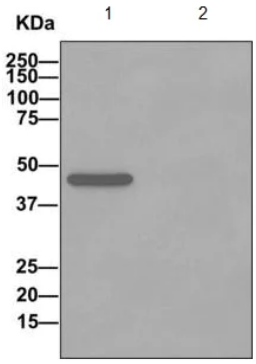


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

TBP-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TBP-1 antibody

This data was developed using ab171969, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue, labeling TBP-1 using ab171969 at a 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

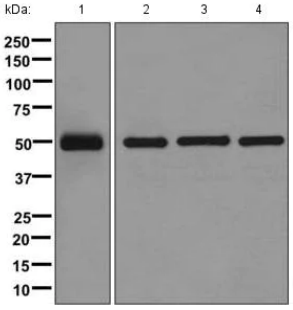


Immunoprecipitation - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

This data was developed using ab171969, the same antibody clone in a different buffer formulation.
Western blot analysis on immunoprecipitation pellet from (Lane 1) HeLa cell lysate or (Lane 2) 1X PBS (negative control) using ab171969 at a 1/10 dilution and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

All lanes:
Immunoprecipitation - Anti-TBP-1 antibody [EPR12152] - N-terminal (ab171969)

Predicted band size: 49 kDa



Western blot - Anti-TBP-1 antibody [EPR12152] - BSA and Azide free (ab249681)

TBP-1 Western blot staining using rabbit Anti-TBP-1 antibody

This data was developed using ab171969, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-TBP-1 antibody [EPR12152] - N-terminal (ab171969) at 1/1000 dilution

Lane 1:
Human placenta lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Lane 4:
HepG2 cell lysate at 10 µg

Secondary

All lanes:
Standard HRP labeled goat anti-rabbit at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 49 kDa

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