abcam

ab171974

Anti-TBP-1 antibody [EPR12153]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR12153
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

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	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	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.

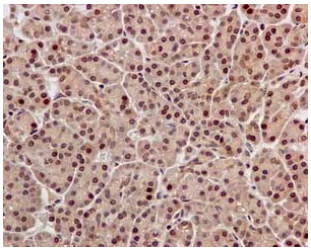
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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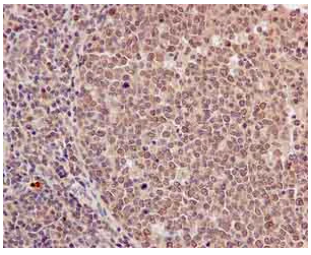
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBP-1 antibody [EPR12153] (ab171974)

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

Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling TBP-1 with ab171974 at 1/100 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

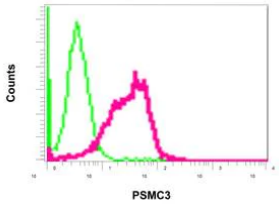


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TBP-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TBP-1 antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling TBP-1 with ab171974 at 1/100 dilution

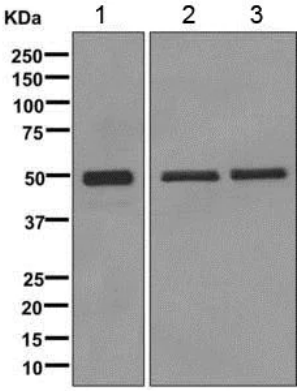
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-TBP-1 antibody [EPR12153] (ab171974)

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

Intracellular flow cytometric analysis of permeabilized HeLa cells labeling TBP-1 with ab171974 at 1/100 dilution (red) or a Rabbit IgG (negative) (green).



Western blot - Anti-TBP-1 antibody [EPR12153] (ab171974)

All lanes:
Western blot - Anti-TBP-1 antibody [EPR12153] (ab171974) at 1/1000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

Predicted band size: 49 kDa

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