abcam

ab54685

Anti-TPP1 antibody [3B1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human TPP1 aa 150-350. The exact immunogen used to generate this antibody is proprietary information. Database link O14773
Clone number	3B1
Purity	Tissue culture supernatant
Specificity	This product detects Tripeptidyl-peptidase 1 (TPP1). It is unable to detect Adrenocortical dysplasia protein homolog which is also known as TPP1.
Light chain type	kappa
Purification notes	Purified from TCS.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information TPP1

Function	Lysosomal serine protease with tripeptidyl-peptidase I activity (PubMed:11054422, PubMed:19038966, PubMed:19038967). May act as a non-specific lysosomal peptidase which generates tripeptides from the breakdown products produced by lysosomal proteinases (PubMed:11054422, PubMed:19038966, PubMed:19038967). Requires substrates with an unsubstituted N-terminus (PubMed:19038966).

Storage

Shipped at conditions	Blue Ice
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

This product was changed from ascites to tissue culture supernatant on 24/1/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Supplementary info

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

Activity summary	Tripeptidyl peptidase I (TPP1) also known as CLN2 is a lysosomal serine protease with a molecular mass of about 61 kDa. TPP1 is expressed in numerous tissues with notable activity in the brain and retinal cells. Mechanically TPP1's primary function includes cleaving N-terminal tripeptides from substrates an important step in protein degradation and turnover within the lysosome.
Biological function summary	This protease plays an essential role in maintaining cellular function by preventing the accumulation of partially degraded proteins. TPP1 exists as part of a lysosomal enzyme complex involved in the catabolic process that recycles cellular components. Its action ensures proper protein homeostasis protecting cells from toxic buildup that can lead to cellular dysfunction.
Pathways	TPP1 is a part of the lysosomal degradation pathway critical for cellular waste management and nutrient recycling. This pathway intersects with broader metabolic routes where TPP1 activity supports the catabolism of intracytoplasmic substrates. TPP1 also interacts with proteins such as cathepsin D another enzyme contributing to proteolytic pathways to maintain the balance and efficiency of protein degradation processes.
Associated diseases and disorders	TPP1 mutations are associated with neuronal ceroid lipofuscinosis type 2 (CLN2 disease) a rare neurodegenerative disorder. This disease involves progressive brain and retinal degeneration due to lysosomal storage malfunction. The TPP1 connection to CLN2 disease highlights its essential role in neurological health. Additionally TPP1 has links to Batten disease where compromised enzyme function leads to severe neurological symptoms. Other proteins like CLN3 may also interact with TPP1 in these disease contexts influencing their progression and pathology.

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.

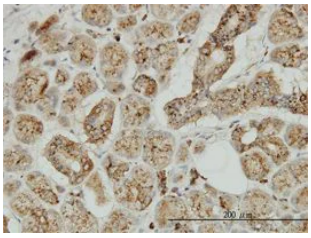
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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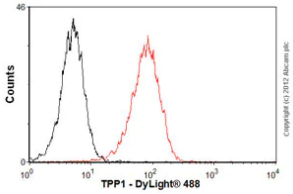
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TPP1 antibody [3B1] (ab54685)

TPP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-TPP1 antibody

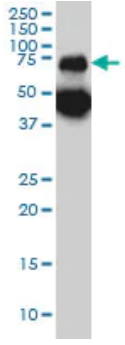
TPP1 antibody (ab54685) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human salivary gland.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-TPP1 antibody [3B1] (ab54685)

TPP1 Flow Cytometry staining using mouse Anti-TPP1 antibody

Overlay histogram showing JEG3 cells stained with ab54685 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab54685, 2µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
This image was generated using the ascites version of the product.



Western blot - Anti-TPP1 antibody [3B1] (ab54685)

TPP1 Western blot staining using mouse Anti-TPP1 antibody

TPP1 antibody (ab54685) at 1ug/lane + A-431 cell lysate at 25ug/lane.
This image was generated using the ascites version of the product.

All lanes:
Western blot - Anti-TPP1 antibody [3B1] (ab54685)

Predicted band size: 61 kDa

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