abcam

ab302895

Anti-PPT1/PPT antibody [EPR27163-2]

Recombinant | RabMAb | 20ul selling size

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	EPR27163-2
Purification technique	Affinity purification Protein A
Concentration	0.462 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PPT1

Function	Has thioesterase activity against fatty acid thioesters with 14 -18 carbons, including palmitoyl-CoA, S-palmitoyl-N-acetylcysteamine, and palmitoylated proteins (PubMed:12855696, PubMed:26731412, PubMed:8816748). In contrast to

PPT2, PPT1 can hydrolyze palmitoylated proteins and palmitoylcysteine (PubMed:12855696).

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	PPT1 also known as palmitoyl-protein thioesterase 1 is an enzyme that plays a critical role in protein metabolism by removing thioester-linked palmitate groups from proteins. This enzyme has a molecular weight of approximately 37 kDa. PPT1 is expressed widely in the body with significant expression in tissues such as the brain and liver. It localizes primarily in the lysosomes where it assists in lysosomal degradation pathways. Polyclonal antibodies against PPT1 can be utilized in protein analysis and help elucidate the structure and functionality of this enzyme further.

Biological function summary	PPT1 contributes to the turnover and stability of proteins by mediating their de-palmitoylation an important step in maintaining appropriate protein function and cellular homeostasis. This enzyme assists in the recycling and degradation process by facilitating the catabolism of proteins through the lysosomal pathway. PPT1 does not function as part of a larger complex but operates individually to execute the removal of palmitate which impacts a diverse range of substrates vital for controlling cellular mechanisms such as synaptic function.
Pathways	PPT1 is heavily involved in the protein degradation pathway within lysosomes. This pathway is important for the autophagic degradation process which directly associates with cellular waste management and the recycling of cellular components. PPT1's function is also connected to protein stability because improper palmitoylation can disrupt protein location and function. The enzyme shows functional interaction with proteins like CLN2 which also participates in lysosomal degradation processes and they share involvement in neuronal homeostasis.
Associated diseases and disorders	Defects in PPT1 activity lead to neurodegenerative conditions notably the Infantile Neuronal Ceroid Lipofuscinosis (INCL). This disorder results from the accumulation of lipid-protein complexes in neurons emphasizing the need for proper PPT1 function. PPT1 has connections to the disease context through its interaction with the protein CLN3 another gene implicated in Batten disease part of the neuronal ceroid lipofuscinoses group. The study of PPT1 opens avenues for therapeutic approaches targeting these lysosomal storage disorders. Immunohistochemistry and immunocytochemistry are techniques often used to study the role of PPT1 in these pathological states.

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

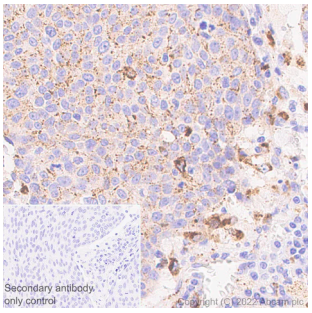
We do not recommend this combination. It is not covered by our product promise.

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.

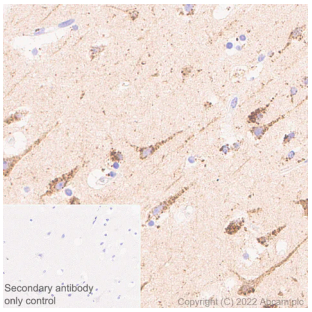
Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



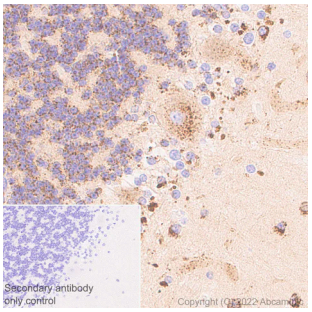
Immunohistochemistry - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

Immunohistochemical analysis of paraffin-embedded Human lung cancer tissue labeling PPT1/PPT with ab302895 at 1/5000 (0.092 ug/ml) followed by a LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Positive staining on human lung cancer. The section was incubated with ab302895 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



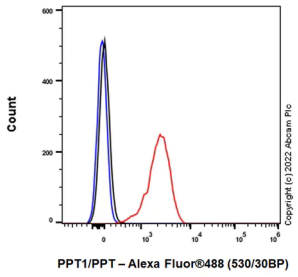
Immunohistochemistry - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling PPT1/PPT with ab302895 at 1/5000 (0.092 ug/ml) followed by a LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Positive staining on human cerebrum. The section was incubated with ab302895 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



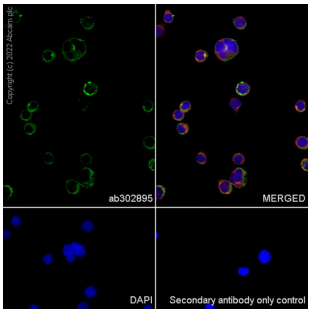
Immunohistochemistry - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

Immunohistochemical analysis of paraffin-embedded Human cerebellum tissue labeling PPT1/PPT with ab302895 at 1/5000 (0.092 ug/ml) followed by a LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Positive staining on human cerebellum. The section was incubated with ab302895 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is LeicaDS9800 (Bond☒ Polymer Refine Detection) was used at Ready to use dilution. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



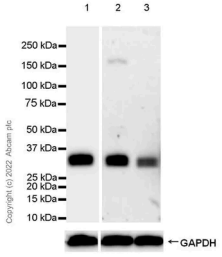
Flow Cytometry (Intracellular) - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling PPT1/PPT with ab302895 at 1/500 dilution (0.1ug) (Red) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

Immunofluorescent analysis of 80% Methanol-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling PPT1/PPT with ab302895 at 1/50 (9.24 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing cytoplasmic staining in THP-1 cell line. is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2ug/ml dilution.



Western blot - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895)

PPT1/PPT Western blot staining using rabbit Anti-PPT1/PPT antibody

Blocking / Diluting buffer and concentration: 5% NFDM/TBST

Exposure time:

Lane 1: 15 seconds

Lanes 2-3: 180 seconds

All lanes:
Western blot - Anti-PPT1/PPT antibody [EPR27163-2] (ab302895) at 1/1000 dilution

Lane 1:
Human cerebellum tissue lysate at 20 µg

Lane 2:
Human hypothalamus tissue lysate at 20 µg

Lane 3:
Human lung cancer tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 34 kDa

Observed band size: 31-35 kDa

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