10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PPT1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2538b

Product Information

Application	WB, IHC-P, E
Primary Accession	P50897
Other Accession	Q8HXW6
Reactivity	Human
Predicted	Monkey, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4707
Calculated MW	34193
Antigen Region	269-300

Additional Information

Gene ID	5538
Other Names	Palmitoyl-protein thioesterase 1, PPT-1, Palmitoyl-protein hydrolase 1, PPT1, PPT
Target/Specificity	This PPT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 269-300 amino acids from the C-terminal region of human PPT1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PPT1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PPT1
Synonyms	CLN1 {ECO:0000303|PubMed:19941651}, PPT

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).
Cellular Location	Lysosome. Secreted Golgi apparatus. Endoplasmic reticulum

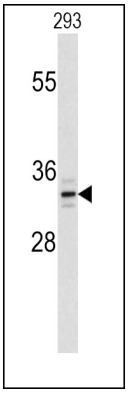
Background

Palmitoyl-protein thioesterase-1 (PPT1) is a lysosomal hydrolase that removes long-chain fatty acyl groups from modified cysteine residues in proteins. Mutations in PPT1 have been found to cause the infantile form of neuronal ceroid lipofuscinosis (INCL), and an animal model has been developed.1 The deduced PPT2 protein contains 302 amino acids, including a 27-amino acid leader peptide, a sequence motif characteristic of many thioesterases and lipases, and 5 potential N-linked glycosylation sites.2 PPT2 shares 18% amino acid identity with PPT1. Northern blot analysis detected a predominant 2.0-kb PPT2 transcript in the human tissues examined, with the highest expression in skeletal muscle; variable amounts of 2.8- and 7.0-kb transcripts were also observed. Recombinant PPT2, like PPT1, possesses thioesterase activity and localizes to the lysosome. Since PPT2 could not substitute for PPT1 in correcting the metabolic defect in INCL cells and was unable to remove palmitate groups from palmitoylated proteins that are routinely used as substrates for PPT1it has been postulated that PPT2 possesses a different substrate specificity than PPT1.

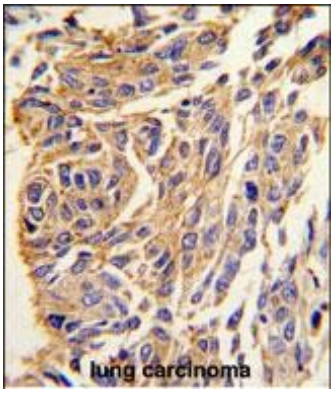
References

Calero, G., et al., J. Biol. Chem. 278(39):37957-37964 (2003).
Hofmann, S.L., et al., Curr. Mol. Med. 2(5):423-437 (2002).
Weimer, J.M., et al., Neuromolecular Med. 1(2):111-124 (2002).
Lu, J.Y., et al., Proc. Natl. Acad. Sci. U.S.A. 93(19):10046-10050 (1996).
Crews, C.M., et al., Proc. Natl. Acad. Sci. U.S.A. 93(9):4316-4319 (1996).

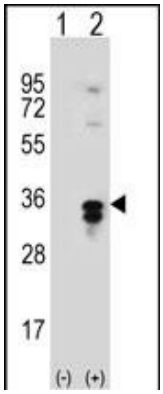
Images



Western blot analysis of PPT1 Antibody (C-term) (Cat. #AP2538b) in 293 cell line lysates (35ug/lane). PPT1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with PPT1 antibody (C-term) (Cat. #AP2538b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Western blot analysis of PPT1 (arrow) using rabbit polyclonal PPT1 Antibody (A284) (Cat. #AP2538b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PPT1 gene.

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