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CATB Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7367C

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P07858
Other Accession	Q4R5M2
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19412
Calculated MW	37822
Antigen Region	198-227

Additional Information

Gene ID	1508
Other Names	Cathepsin B, APP secretase, APPS, Cathepsin B1, Cathepsin B light chain, Cathepsin B heavy chain, CTSB, CPSB
Target/Specificity	This CATB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 198-227 amino acids from the Central region of human CATB.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	CATB Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CTSB
Synonyms	CPSB

Function	Thiol protease which is believed to participate in intracellular degradation and turnover of proteins (PubMed:12220505). Cleaves matrix extracellular phosphoglycoprotein MEPE (PubMed:12220505). Involved in the solubilization of cross-linked TG/thyroglobulin in the thyroid follicle lumen (By similarity). Has also been implicated in tumor invasion and metastasis (PubMed:3972105).
Cellular Location	Lysosome. Melanosome. Secreted, extracellular space {ECO:0000250|UniProtKB:A1E295}. Apical cell membrane {ECO:0000250|UniProtKB:P10605}; Peripheral membrane protein {ECO:0000250|UniProtKB:P10605}; Extracellular side {ECO:0000250|UniProtKB:P10605}. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065) Localizes to the lumen of thyroid follicles and to the apical membrane of thyroid epithelial cells (By similarity) {ECO:0000250|UniProtKB:P10605, ECO:0000269|PubMed:17081065}
Tissue Location	Expressed in the stratum spinosum of the epidermis. Weak expression is detected in the stratum granulosum

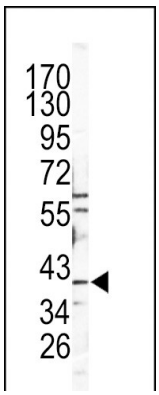
Background

The protein CATB is a lysosomal cysteine proteinase composed of a dimer of disulfide-linked heavy and light chains, both produced from a single protein precursor. It is also known as amyloid precursor protein secretase and is involved in the proteolytic processing of amyloid precursor protein (APP). Incomplete proteolytic processing of APP has been suggested to be a causative factor in Alzheimer disease, the most common cause of dementia. Overexpression of the protein, which is a member of the peptidase C1 family, has been associated with esophageal adenocarcinoma and other tumors.

References

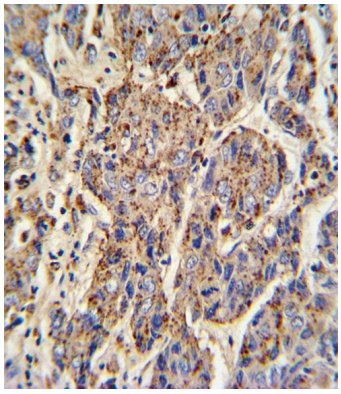
Zhang,H., J. Immunol. 182 (11), 6993-7000 (2009)
Duncan,J.A., J. Immunol. 182 (10), 6460-6469 (2009)

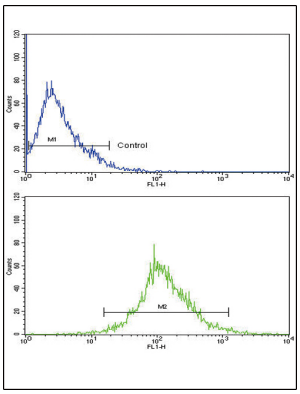
Images



Western blot analysis of CATB Antibody (Center) (Cat.# AP7367c) in Y79 cell line lysates (35ug/lane). CATB (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human hepatocarcinoma with CATB Antibody (Center), 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.





Flow cytometric analysis of HepG2 cells using CATB Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Effects of the lysosomal destabilizing drug siramesine on glioblastoma in vitro and in vivo.