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Cathepsin D Rabbit pAb

Catalog # AP96758

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P18242
Other Accession	P18242
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44954
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Cathepsin D heavy chain
Epitope Specificity	121-220/410
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase A1 family.
Post-translational modifications	N- and O-glycosylated.
DISEASE	Defects in CTSD are the cause of neuronal ceroid lipofuscinosis type 10 (CLN10); also known as neuronal ceroid lipofuscinosis due to cathepsin D deficiency. A form of neuronal ceroid lipofuscinosis with onset at birth or early childhood. Neuronal ceroid lipofuscinoses are progressive neurodegenerative, lysosomal storage diseases characterized by intracellular accumulation of autofluorescent liposomal material, and clinically by seizures, dementia, visual loss, and/or cerebral atrophy.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Cathepsin D is a normal lysosomal protease that is expressed in all cells. It is an aspartyl protease with a pH optimum in the range of 3-5, and contains two N-linked oligosaccharides. Cathepsin D is synthesized as an inactive 52 kDa pro enzyme. Activation involves the proteolytic removal of the 43 amino acid profragment and an internal cleavage to generate the two-chain form made up of 34 and 14 kDa subunits. Cathepsin D contains the mannose-6-phosphate lysosomal localization signal that targets the enzyme to the lysosomal compartment where it functions in the normal degradation of proteins. In certain tumor cells, Cathepsin D is abnormally processed and is secreted in its 52 kDa precursor form. Numerous clinical studies as well as in vitro evidence suggest that cathepsin D plays an important role in malignant transformation and may be a useful prognostic indicator for breast cancer and possibly Alzheimer's disease.

Additional Information

Gene ID	13033
Other Names	CLN10; CPSD; HEL-S-130P; CD; CatD; CATD_HUMAN; CTSD; 3.4.23.5; CATD_MOUSE; cathepsin D; cathepsin D (lysosomal aspartyl protease); ceroid-lipofuscinosis, neuronal 10
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Ctsd
Function	Acid protease active in intracellular protein breakdown. Plays a role in APP processing following cleavage and activation by ADAM30 which leads to APP degradation.
Cellular Location	Lysosome. Melanosome. Secreted, extracellular space

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