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**[ Primary Antibody ]**

# Rabbit Anti-Cathepsin D antibody

**Catalog Number: SL1615R**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

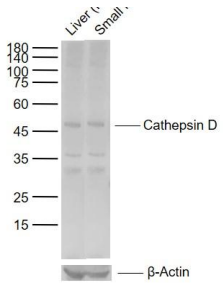
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|---|---|
| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | Cathepsin D |
| **Immunogen:** | KLH conjugated synthetic peptide derived from human Cathepsin D light chain: 101-200/412 |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. |
| **Applications:** | WB=1:500-2000 （Paraffin sections need antigen repair）<br>not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Rat(predicted:Human,Mouse,Dog,Pig,Cow,Rabbit) |
| **Predicted MW.:** | 11/38/45kDa |
| **Subcellular Location:** | cytoplasmic Secretory protein |
| **Background:** | 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.<br>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.<br>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. |

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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| | **Function:** Acid protease active in intracellular protein breakdown. Involved in the pathogenesis of several diseases such as breast cancer and possibly Alzheimer disease.<br>**Subcellular Location:** Lysosome. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.<br>**Tissue Specificity:** Expressed in the aorta extrcellular space (at protein level).<br>**Post-translational modifications:** N- and O-glycosylated.<br>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.<br>**Similarity:** Belongs to the peptidase A1 family.<br>**Database links:**<br>**Entrez Gene:** 1509 Human<br>**Entrez Gene:** 13033 Mouse<br>Omim: 116840 Human<br>**SwissProt:** P07339 Human<br>**SwissProt:** P18242 Mouse<br>**Unigene:** 654447 Human<br>**Unigene:** 231395 Mouse |

## [ VALIDATION IMAGES ]




Sample:
Lane 1: Rat Liver tissue lysates
Lane 2: Rat Small intestine tissue lysates
Primary: Anti-Cathepsin D (SL1615R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 11/38/45 kDa
Observed band size: 46 kDa

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