

## Basic Information

<b>Product Name</b>	Anti-Cathepsin D/CTSD Antibody	
<b>Gene Name</b>	CTSD	
<b>Source</b>	Rabbit	
<b>Clonality</b>	Polyclonal	
<b>Isotype</b>	IgG	
<b>Species Reactivity</b>	human	
<b>Tested Application</b>	WB, IHC, FCM, ICC/IF	
<b>Contents</b>	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.	
<b>Immunogen</b>	E.coli-derived human Cathepsin D recombinant protein (Position: M201-L412). Human Cathepsin D shares 84.4% and 84% amino acid (aa) sequence identity with mouse and rat Cathepsin D, respectively.	
<b>Concentration</b>	500 ug/ml	
<b>Purification</b>	Immunogen affinity purified.	
<b>Observed MW</b>	28,45 kDa	
<b>Dilution Ratios</b>	Western blot (WB):	1:500-2000
	Immunohistochemistry (IHC):	1:50-400
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Flow Cytometry (Fixed):	1:50-200
	(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

## Storage

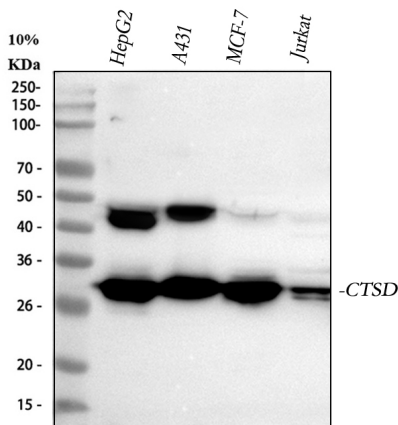
12 months from date of receipt, -20°C as supplied.

## Background Information

Cathepsin D is a protein that in humans is encoded by the CTSD gene. This proteinase is a member of the peptidase C1 family, having a specificity similar to but narrower than that of pepsin A. It is mapped to 11p15.5. The cDNA encodes a 412-amino acid protein with 20 and 44 amino acids in a pre- and prosegment, respectively. Cathepsin D is one of the lysosomal proteinases. It is ubiquitously expressed and is involved in proteolytic degradation, cell invasion, and apoptosis. Mutations in this gene are involved in the pathogenesis of several diseases, including breast cancer and

possibly Alzheimer disease and it has been considered as a breast cancer tumor marker.

## Selected Validation Data



Western blot analysis of Cathepsin D/CTSD using anti-Cathepsin D/CTSD antibody (PB9854). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HepG2 whole cell lysates,

Lane 2: human A431 whole cell lysates,

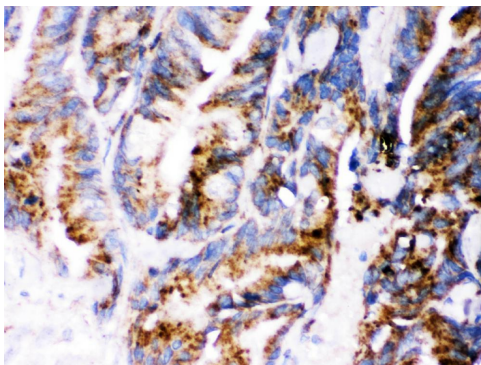
Lane 3: human MCF-7 whole cell lysates,

Lane 4: human Jurkat whole cell lysates.

After electrophoresis, proteins were transferred to a membrane.

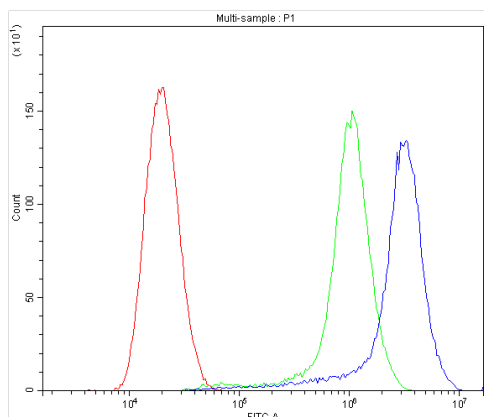
Then the membrane was incubated with rabbit anti-Cathepsin D/CTSD antigen affinity purified polyclonal antibody (PB9854) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP

secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Cathepsin D/CTSD at approximately 28, 45 kDa. The expected band size for Cathepsin D/CTSD is at 45 kDa.



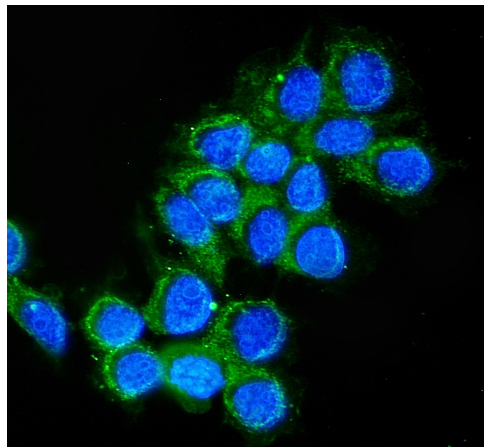
IHC analysis of Cathepsin D/CTSD using anti-Cathepsin D/CTSD antibody (PB9854).

Cathepsin D/CTSD was detected in a paraffin-embedded section of human intestinal cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-Cathepsin D/CTSD Antibody (PB9854) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



Flow Cytometry analysis of SiHa cells using anti-Cathepsin D/CTSD antibody (PB9854).

Overlay histogram showing SiHa cells stained with PB9854 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Cathepsin D/CTSD Antibody (PB9854) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



ICC/IF analysis of Cathepsin D/CTSD using anti-Cathepsin D/CTSD antibody (PB9854).

Cathepsin D/CTSD was detected in an immunocytochemical section of MCF-7 cells. The section was incubated with rabbit anti-Cathepsin D/CTSD Antibody (PB9854) at a dilution of 1:100. Fluoro488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog#BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).