



## Cathepsin V

## Data Sheet

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<b>Catalog Number:</b>	GT15199	<b>Host:</b>	Goat
<b>Product Type:</b>	Affinity Purified Antibody	<b>Species Reactivity:</b>	Human
<b>Immunogen Sequence:</b>	NS0-derived, recombinant human Cathepsin V (rhCathepsin V).	<b>Format:</b>	Liquid 1mg/ml Solution in phosphate-buffered saline (PBS) with 5% Trehlose
<b>Applications:</b>	Immunohistochemistry -2-15 µg/mL Western Blot-1 - 2 µg/mL Direct ELISA-.05-1.0 µg/mL		
<b>Storage:</b>	Dilutions listed as a recommendation. Optimal dilution should be determined by investigator. Antibody can be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. <i>Avoid repeated freeze-thaw cycles.</i>		

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### Application Notes

#### Specificity

This antibody was selected for its ability to recognize human Cathepsin V in Immunohistochemistry, Neutralization, Western Blots and sandwich ELISAs.

#### Western Blot

This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human Cathepsin V. The detection limit for rhCathepsin V is approximately 5 ng/lane under non-reducing and reducing conditions.

#### Immunohistochemistry

This antibody will detect Cathepsin V in cells and tissues. The working dilution is 2 - 15 µg/mL.

#### Direct ELISA

This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human Cathepsin V. The detection limit for rhCathepsin V is approximately 0.1 ng/well. In this format, this antibody shows approximately 15% cross-reactivity with rhCathepsin C and less than 5% cross-reactivity with rhCathepsin A, rhCathepsin D, rhCathepsin X/Z/P, rhCathepsin S and rhCathepsin L..

#### Neutralization

This antibody has been used to inhibit/neutralize the enzymatic activity of rhCathepsin V. The antibody was preincubated with the activated enzyme at different molar ratios at room temperature for 30 min. The enzyme was then assayed with a peptide substrate (Z-L-R-AMC). Fifty percent of the proteolytic activity was inhibited by the antibody at approximately 2.2 µg/mL (IC50) under conditions in which the enzyme was present at 0.5 µg/mL and the substrate concentration was 10 µM. Considering the molecular masses of the enzyme (37 kDa) and the antibody (150 kDa), IC50 was achieved at approximately 1:1 molar ratio of the antibody to the enzyme.

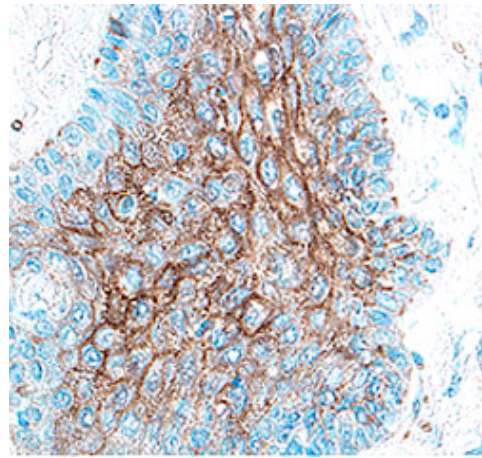
#### Description/Data:

Cathepsin V, also known as Cathepsin L2 and Cathepsin U, is a cysteine protease of the papain family. It is expressed as a proenzyme in lysosomes, which can be autocatalytically converted to the mature form at pH 4.0. Cathepsin V is specifically expressed in the thymus, testis, and corneal epithelium.

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*Image: Cathepsin V staining of paraffin-embedded human breast cancer tissue using 1.7 µg/ml of Cathepsin V. Tissues were stained using anti-goat HRP-DAB (brown) and counterstained with hematoxylin (blue).*



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