

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cathepsin V in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human (rh) Cathepsin C is observed and less than 5% cross-reactivity with rhCathepsin A, rhCathepsin D, rhCathepsin X/Z/P, rhCathepsin S, and rhCathepsin L is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cathepsin V Val18-Val334 Accession # O60911
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

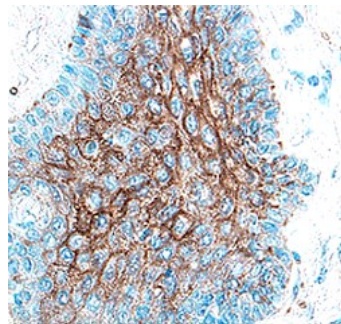
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Cathepsin V (Catalog # 1080-CY)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize Recombinant Human Cathepsin V (0.5 µg/mL, Catalog # 1080-CY) cleavage of the fluorogenic peptide substrate Z-LR-AMC (10 µM, Catalog # ES008). The Neutralization Dose (ND ₅₀) is typically 2.2 µg/mL.	

DATA

Immunohistochemistry



Cathepsin V in Human Breast Cancer Tissue. Cathepsin V was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using 1.7 µg/mL Goat Anti-Human Cathepsin V Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1080) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). [View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.](#)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Cathepsin V (also known as Cathepsin L2 and U) is a cysteine protease of the papain family (1). It is expressed as a proenzyme in lysosomes, which can be autocatalytically converted to the mature form at pH 4.0 (2). Cathepsin V shows high amino acid identity with Cathepsin L (77% for the proenzymes and 80% for the mature enzymes) (3). However, Cathepsin V is specifically expressed in the thymus, testis, and corneal epithelium whereas Cathepsin L is expressed throughout the body.

References:

1. Turk, V. *et al.* (2001) *EMBO J.* **20**:4629.
2. Bromme, D. *et al.* (1999) *Biochemistry* **38**:2377.
3. Somoza, J.R. *et al.* (2000) *Biochemistry* **39**:12543.