

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Cathepsin S in ELISAs and Western blots. In sandwich ELISAs, less than 0.05% cross-reactivity with recombinant human Cathepsin A, B, C, D, E, L, V, and X/Z/P is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Cathepsin S Gln17-Ile331 Accession # P25774
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

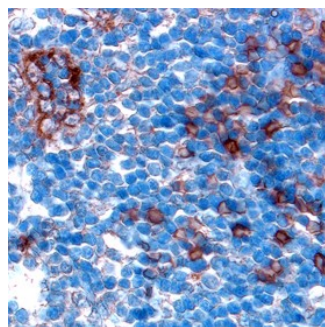
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Cathepsin S (Catalog # <a href="#">1183-CY</a> )
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cathepsin S (Catalog # <a href="#">1183-CY</a> ), <a href="#">see our available Western blot detection antibodies</a>
<b>Human Cathepsin S Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Human Cathepsin S Antibody (Catalog # <a href="#">AF1183</a> )
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human Cathepsin S Biotinylated Antibody (Catalog # <a href="#">BAF1183</a> )
<b>Standard</b>		Recombinant Human Cathepsin S (Catalog # <a href="#">1183-CY</a> )
<b>Neutralization</b>	Measured by its ability to neutralize activation and the resulting activity of Recombinant Human Cathepsin S (0.25 µg/mL, Catalog # <a href="#">1183-CY</a> ) in cleaving the fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK(Dnp)-NH <sub>2</sub> (10 µM, Catalog # <a href="#">ES002</a> ). The Neutralization Dose (ND <sub>50</sub> ) is typically 2 µg/mL.	

## DATA

### Immunohistochemistry



#### Cathepsin S in Human Lymph Node.

Cathepsin S was detected in immersion fixed paraffin-embedded sections of human lymph node using Goat Anti-Human Cathepsin S Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1183) at 15 µg/mL overnight at 4 °C. Tissue was stained using 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 immersion fixed paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

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

## BACKGROUND

Cathepsin S is a lysosomal cysteine protease of the papain family (1). It plays a major role in the processing of the MHC class II-associated invariant chain (2). It has been implicated in the pathogenesis of several diseases such as Alzheimer's disease and degenerative disorders associated with the cells of the mononuclear phagocytic system (1). Human Cathepsin S is synthesized as a preproenzyme of 331 amino acid residues consisting a signal peptide (residues 1-16), a pro region (residues 17-114), and the mature enzyme (residues 115-331) (3-5). Cathepsin S is less abundant in tissues than Cathepsins B, L and H. The highest levels have been found in lymph nodes, spleen, macrophages, and other phagocytic cells.

### References:

- Kirschke, H. (2004) in *Handbook of Proteolytic Enzymes* (ed. Barrett, A.J. *et al.*) pp. 1104 - 1107, Academic Press, San Diego.
- Turk, V. *et al.* (2001) *EMBO J.* **20**:4629.
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- Wiederanders, B. *et al.* (1992) *J. Biol. Chem.* **267**:13708.