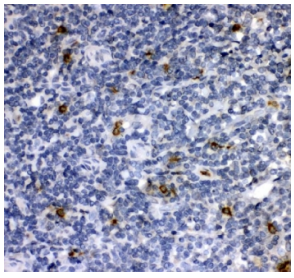
# Cathepsin G Antibody / CTSG (R32521)

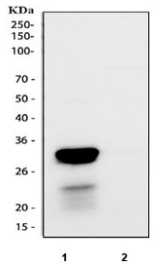
| Catalog No. | Formulation | Size |
|---|---|---|
| R32521 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | P08311 |
| **Localization** | Cytoplasmic |
| **Applications** | Western blot: 0.5-1ug/ml<br>Immunohistochemistry (FFPE): 2-5ug/ml |
| **Limitations** | This Cathepsin G antibody is available for research use only. |



Cathepsin G Antibody Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil tissue with Cathepsin G antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.




Western blot testing of human 1) ThP-1 and 2) MCF7 cell lysate with Cathepsin G antibody at 0.5ug/ml. Predicted molecular weight ~29 kDa, can be observed at ~36 kDa.

## Description

Cathepsin G Antibody detects CTSG, a serine protease encoded by the CTSG gene that is predominantly expressed within the azurophilic granules of neutrophils and other cells of the myeloid lineage. Following immune cell activation, Cathepsin G is released into phagolysosomes and the extracellular environment, where it contributes to antimicrobial defense, inflammatory signaling and extracellular matrix remodeling. Through its broad proteolytic activity, CTSG participates in pathogen clearance while regulating numerous components of the innate immune response.

CTSG belongs to the family of neutrophil serine proteases together with neutrophil elastase and proteinase 3. The enzyme processes cytokines, chemokines and other inflammatory mediators while contributing to leukocyte migration, platelet activation and tissue remodeling during inflammation. Cathepsin G also influences signaling through protease-activated receptors and participates in communication between innate and adaptive immune cells. Consequently, CTSG Antibody / Cathepsin G Antibody is widely used to investigate neutrophil activation, inflammatory mechanisms and host defense.

Altered CTSG expression or activity has been associated with chronic inflammatory disorders, autoimmune disease, cardiovascular disease, pulmonary inflammation and hematologic malignancies. Dysregulated protease activity can promote tissue injury and prolonged inflammation, while controlled Cathepsin G activity is essential for effective antimicrobial immunity. These diverse biological functions have made CTSG an important biomarker for studies of innate immunity, myeloid cell biology and inflammatory disease progression.

NSJ Bioreagents offers Cathepsin G Antibody for sensitive and reproducible detection of CTSG in multiple immunoassays.

Researchers seeking additional Cathepsin G antibodies, including products targeting this protein as a key Neutrophil Serine Protease with complementary validation data, are encouraged to explore our Cathepsin G Antibody / Neutrophil Serine Protease Antibody page.

## Application Notes

Differences in protocols and secondary/substrate sensitivity may require the Cathepsin G antibody to be titrated for optimal performance.

## Immunogen

Amino acids R25-E252 from the human protein were used as the immunogen for the Cathepsin G antibody.

## Storage

After reconstitution, the Cathepsin G antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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