abcam

ab182575

Anti-Cathepsin Z antibody [EPR14357-7]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR14357-7
Purification technique	Affinity purification Protein A
Concentration	0.434 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/20 - 1/40
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Cathepsin Z

Function	Exhibits carboxy-monopeptidase as well as carboxy-dipeptidase activity (PubMed:10504234). Capable of producing kinin potentiating peptides (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cathepsin Z also known as cathepsin X or CTSZ is a lysosomal cysteine protease with a molecular weight of approximately 34 kDa. It is expressed mainly in immune cells such as macrophages and dendritic cells but also found in other tissues including liver kidney and spleen. This protease performs proteolytic functions which involve cleaving peptide bonds in proteins contributing to protein

	catabolism in cells. The widespread expression of Cathepsin Z suggests its involvement in various physiological processes.
Biological function summary	Cathepsin Z participates in immune response regulation and cellular adhesion processes. It belongs to the papain-like cysteine protease family. Notably it associates with integrins to influence cell-extracellular matrix interactions affecting cell migration and adhesion. By modulating these processes Cathepsin Z impacts immune surveillance and tissue remodeling demonstrating its multifaceted role in maintaining cellular homeostasis.
Pathways	Cathepsin Z engages significantly in apoptotic and antigen-presenting pathways. In apoptosis it influences cell death by degrading specific substrates involved in cell survival. It also assists in the processing of antigens within dendritic cells facilitating effective antigen presentation to T cells. Related proteins such as Cathepsin S and Cathepsin L which also partake in lysosomal pathways further illustrate the shared functionality and redundancy within this protease family enabling a robust regulatory network.
Associated diseases and disorders	Cathepsin Z has implications in cancer progression and neurodegenerative diseases. It is often overexpressed in cancerous tissues where it aids tumor cell invasion and metastasis through degradation of extracellular components. Additionally alterations in Cathepsin Z activity are linked to Alzheimer's disease where it may affect the processing of amyloid precursor proteins similar to its interaction with other proteins like Cathepsin B. These connections highlight the potential for Cathepsin Z as a target for therapeutic intervention in various pathological conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

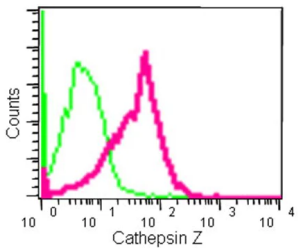
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

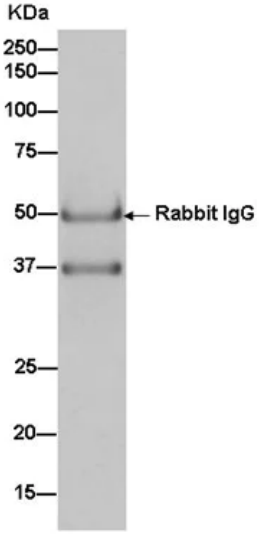
4 product images



Flow Cytometry (Intracellular) - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575)

Cathepsin Z Flow Cytometry (Intracellular) staining using rabbit Anti-Cathepsin Z antibody

Intracellular flow cytometric analysis of 2%paraformaldehyde-fixedHeLa cells labeling Cathepsin Z with ab182575 at 1/80 dilution (red) compared to a Rabbit monoclonal IgG isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary antibodyat 1/150 dilution.

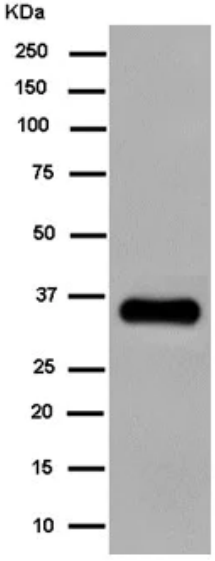


Immunoprecipitation - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575)

Western blot analysis of Cathepsin Z in immunoprecipitation pellets from WI-38 lysate immunoprecipitated using ab182575 at 1/50 dilution.
Secondary antibody: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution.

All lanes:
Immunoprecipitation - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575)

Predicted band size: 33 kDa



Western blot - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575)

Cathepsin Z Western blot staining of WI-38 cell lysate using rabbit Anti-Cathepsin Z antibody

All lanes:
Western blot - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575) at 1/5000 dilution

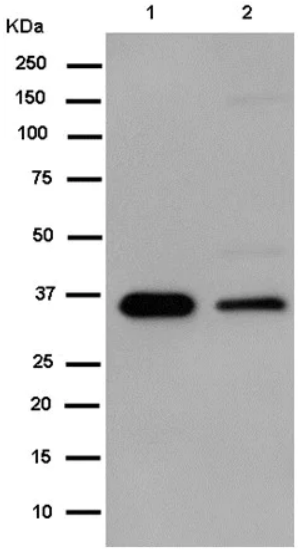
All lanes:
WI-38 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 20 µg

Predicted band size: 33 kDa

Observed band size: 34 kDa



Western blot - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575)

All lanes:
Western blot - Anti-Cathepsin Z antibody [EPR14357-7] (ab182575) at 1/2000 dilution

Lane 1:
Human fetal liver lysate at 20 µg

Lane 2:
HeLa lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 33 kDa

Observed band size: 34 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.