

For Research Use Only

# Recombinant Human Cathepsin D protein (His Tag)



Catalog Number: Eg1053

## Basic Information

**ED50:**  
/

**GeneID:**  
1509

**Species:**  
Human

**Accession:**  
P07339

**Purity:**  
>90 %, SDS-PAGE

## Technical Specifications

**Purity:**  
>90 %, SDS-PAGE

**Endotoxin Level:**  
<1.0 EU/  $\mu$ g protein, LAL method

**Source:**  
HEK293-derived Human Cathepsin D protein Leu21-Leu412 (Accession# P07339) with a His tag at the C-terminus.

**Predicted Molecular Mass:**  
43.4 kDa

**SDS-PAGE:**  
43-49 kDa, reducing (R) conditions

**Formulation:**  
Lyophilized from sterile PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

## Biological Activity

Not tested

## Storage and Shipping

**Storage:**  
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

**Shipping:**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

## Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

## Background

CTSD (Cathepsin D), also named CPSD, belongs to the peptidase A1 family. It is ubiquitously expressed and is involved in proteolytic degradation, cell invasion, and apoptosis. Human CTSD is synthesized as a 52-kDa precursor that is converted into an active 48-kDa single-chain intermediate in the endosomes, and then into a fully active mature form, composed of a 34-kDa heavy chain and a 14-kDa light chain, in the lysosomes. It is a lysosomal acid protease found in neutrophils and monocytes and involved in the pathogenesis of several diseases such as breast cancer and possibly Alzheimer disease (PMID: 27114232, PMID: 30717773, PMID: 30051532).

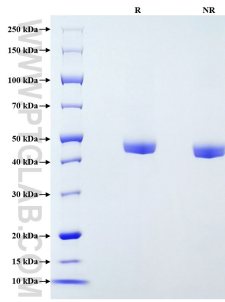
## References

1. Vidoni C, et al. (2016). *Med Res Rev.* 36(5):845-70.
2. Ashraf Y, et al. (2019). *J Immunother Cancer.* 7(1):29.
3. Chai YL, et al. (2019). *Brain Pathol.* 29(1):63-74.
4. Mijanovic O, et al. (2021). *Pharmaceutics.* 5;13(6):837.

## Synonyms

Cathepsin D,CTSD,Cathepsin D heavy chain,Cathepsin

## Selected Validation Data



Purity of Recombinant Human Cathepsin D was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.

For technical support and original validation data for this product please contact

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