

For Research Use Only

# Cathepsin B Recombinant monoclonal antibody, PBS Only (Capture)

Catalog Number: 83998-4-PBS



## Basic Information

|                                                             |                                                 |                                                       |
|-------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------|
| <b>Catalog Number:</b><br>83998-4-PBS                       | <b>GenBank Accession Number:</b><br>NM_001908.5 | <b>Purification Method:</b><br>Protein A purification |
| <b>Size:</b><br>100ug , Concentration: 1 mg/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>1508                   | <b>CloneNo.:</b><br>260854C10                         |
| <b>Source:</b><br>Rabbit                                    | <b>UNIPROT ID:</b><br>P07858                    |                                                       |
| <b>Isotype:</b><br>IgG                                      | <b>Full Name:</b><br>cathepsin B                |                                                       |
| <b>Immunogen Catalog Number:</b><br>EG1020                  | <b>Calculated MW:</b><br>38kDa                  |                                                       |
|                                                             | <b>Observed MW:</b><br>31 kDa, 43 kDa           |                                                       |

## Applications

**Tested Applications:**  
WB, IP, Cytometric bead array, Sandwich ELISA, Indirect ELISA

**Species Specificity:**  
human

## Product Information

83998-4-PBS targets Cathepsin B as part of a matched antibody pair:

MP03489-1: 83998-4-PBS capture and 83998-5-PBS detection (validated in Cytometric bead array, Sandwich ELISA)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

## Background Information

CTSB (Cathepsin B) is also named as CPSB and belongs to the peptidase C1 family. It participates in intracellular degradation and turnover of proteins. Cathepsin B precursors found in human malignant ascites fluid do not possess mannose-rich carbohydrates suggesting that a defect in the post translational processing of carbohydrate moieties on tumor. Cathepsin B exists as both glycosylated and unglycosylated forms (PMID:1637335). In rat macrophages and hepatocytes pro- cathepsin B is 39 kDa (unglycosylated = 35 kDa), whereas in human fibroblasts procathepsin B is 44.5-46kDa (unglycosylated=39kDa) (PMID:2097084). It can be detected the 43 kDa form of pro-CTSB, 31 kDa and 25 kDa mature forms in mouse brain by western blot (PMID:20616152).

## Storage

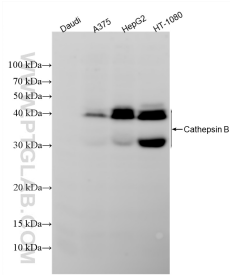
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS only, pH7.3

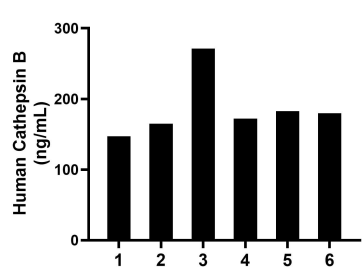
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

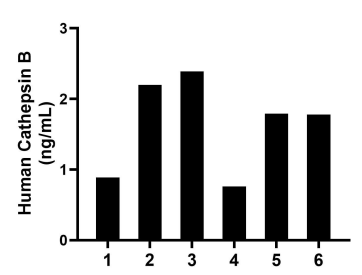
Selected Validation Data



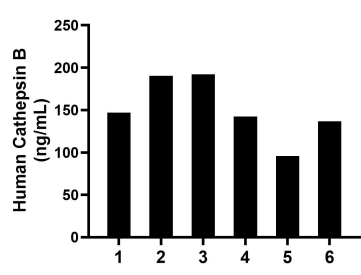
Various lysates were subjected to SDS PAGE followed by western blot with 83998-4-RR (Cathepsin B antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 83998-4-PBS in a different storage buffer formulation.



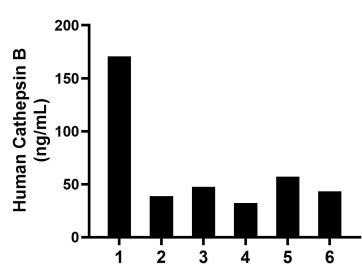
Urine of six individual healthy human donors was measured. The Cathepsin B concentration of detected samples was determined to be 1.64 ng/mL with a range of 0.76-2.39 ng/mL.



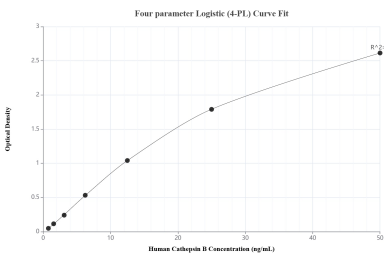
Saliva of six individual healthy human donors was measured. The Cathepsin B concentration of detected samples was determined to be 186.38 ng/mL with a range of 146.98-271.31 ng/mL.



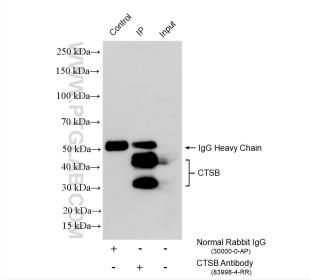
Human milk of six individual healthy human donors was measured. The Cathepsin B concentration of detected samples was determined to be 150.72 ng/mL with a range of 95.82-192.06 ng/mL.



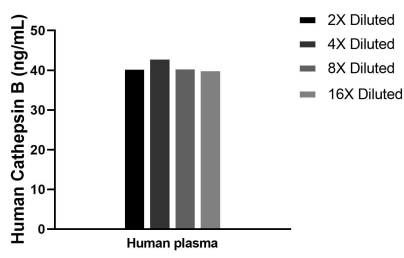
Plasma of six individual healthy human donors was measured. The Cathepsin B concentration of detected samples was determined to be 65.00 ng/mL with a range of 32.20-170.78 ng/mL.



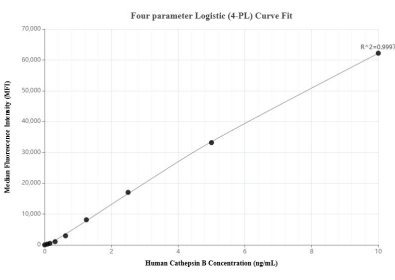
Sandwich ELISA standard curve of MP03489-1, Human Cathepsin B Recombinant Matched Antibody Pair - PBS only. 83998-4-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Eg1020. 83998-5-PBS was HRP conjugated as the detection antibody. Range: 0.781-50 ng/mL.



IP result of anti-Cathepsin B (IP:83998-4-RR, 4ug; Detection:83998-4-RR 1:600) with HepG2 cells lysate 1280 ug. This data was developed using the same antibody clone with 83998-4-PBS in a different storage buffer formulation.



The mean Cathepsin B concentration was determined to be 41.1 ng/mL in human plasma.



Cytometric bead array standard curve of MP03489-1, Cathepsin B Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 83998-4-PBS. Detection antibody: 83998-5-PBS. Standard: Eg1020. Range: 0.078-10 ng/mL.