

# Procathepsin B, Human Recombinant

**CATALOG #:** 7579-10 10 µg  
 7579-50 50 µg  
 7579-1000 1 mg

**SOURCE:** *E. coli*

**ALTERNATIVE NAMES:** CTSB, CPSB

**FORMULATION:** Lyophilized from a proprietary buffer.

**RECONSTITUTION:** Reconstitute in de-ionized water to 1 mg/ml and store at -20°C. Avoid repeated freezing and thawing cycles.

**PURITY:** ≥95% by SDS-PAGE

**MOL. WT.:** 38.2 kDa (18-339 aa + N-terminal poly-his tag)

**STORAGE CONDITIONS:** Stable for at least 1 year as supplied.

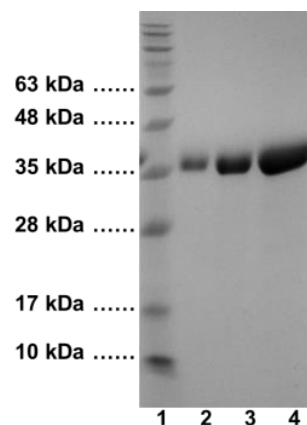
**BACKGROUND:** Cathepsin B is a lysosomal cysteine protease. It is implicated in playing a role in protein degradation, arthritis, apoptosis, and cancer.

**ACTIVITY ASSAY:** Biovision's Procathepsin B can be auto-catalytically activated to mature Cathepsin B (~28 kDa) by adding an equal volume of 0.2 M NaOAc, 5 mM EDTA pH 4.0 containing fresh 5 mM DTT at room temperature (RT). The enzyme is fully activated within 3-4 h of incubation at RT. After activation mature Cathepsin B is highly auto-proteolytic at pH 4.0, and care must be taken to avoid self-proteolysis. If the activated enzyme is not used immediately, methylmethaniosulfonate (1 mM final concentration; MeS-SO<sub>2</sub>Me; MMTS) could be added and sample should be frozen at -80°C. The activity can be then restored by adding L-cysteine (3 M excess over MMTS) to the enzyme solution.

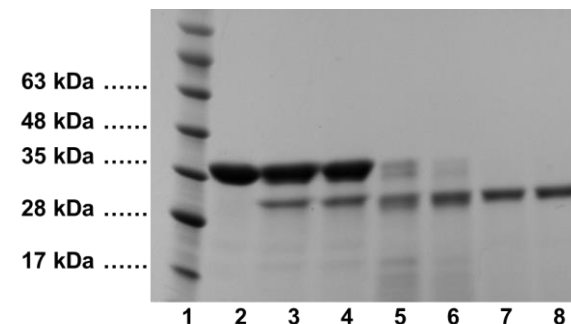
**APPLICATIONS:** Recombinant Procathepsin B is useful in inhibitor screening, kinetic studies and cleavage of substrates *in vitro* or in tissue culture.

**SPECIFIC ACTIVITY:** > 5000 mU/mg (1 U = 1 µmole/min, after complete activation) of Ac-Arg-Arg-AFC substrate (K140-100) at 37°C in 50 mM Tris, 1 mM EDTA, 10 mM DTT, pH 7.2.

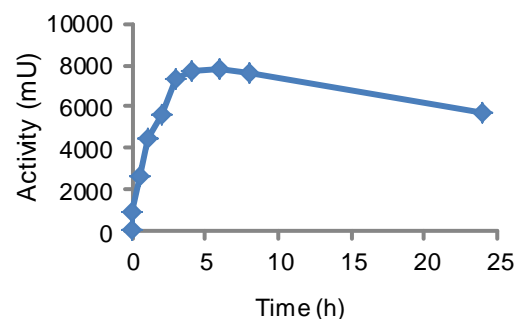
**For Research Use Only! Not to be used in humans.**



SDS-PAGE (15%) of h-Procathepsin B:  
 1: Protein Marker  
 2: Human Procathepsin B (5 µg)  
 3: Human Procathepsin B (10 µg)  
 4: Human Procathepsin B (20 µg)



SDS-PAGE (15%) of activation of h-Procathepsin B:  
 1: Protein Marker  
 2: Human Procathepsin B (10 µg)  
 3 to 8: Human Procathepsin B (10 µg) after 0.5, 1, 2, 3, 4 and 5 h of activation at pH 4.0



Activation of Human Procathepsin B as monitored by BioVision's Cathepsin B activity assay kit, Cat # K140-100.

**RELATED PRODUCTS:**

- Procathepsin K, human recombinant (Cat. No. 1026-10, -50, -1000)
- Procathepsin K, mouse recombinant (Cat. No. 1027-10, -50, -1000)
- Procathepsin K, rat recombinant (Cat. No. 1029-10, -50, -1000)
- Procathepsin L, human recombinant (Cat. No. 7581-5, -100, -1000)
- Cathepsin K, Active, human recombinant (Cat. No. 7600-5, -50)
- Cathepsin K, Active, mouse recombinant (Cat. No. 7597-5, -50)
- Cathepsin K, Active, rat recombinant (Cat. No. 7598-5, -50)
- Cathepsin B (active, human) (Cat. No. 1021-5)
- Cathepsin D (active, human) (Cat. No. 1022-5)
- Cathepsin H (active, human) (Cat. No. 1023-5)

