

# Procathepsin E/ Cathepsin E, human recombinant

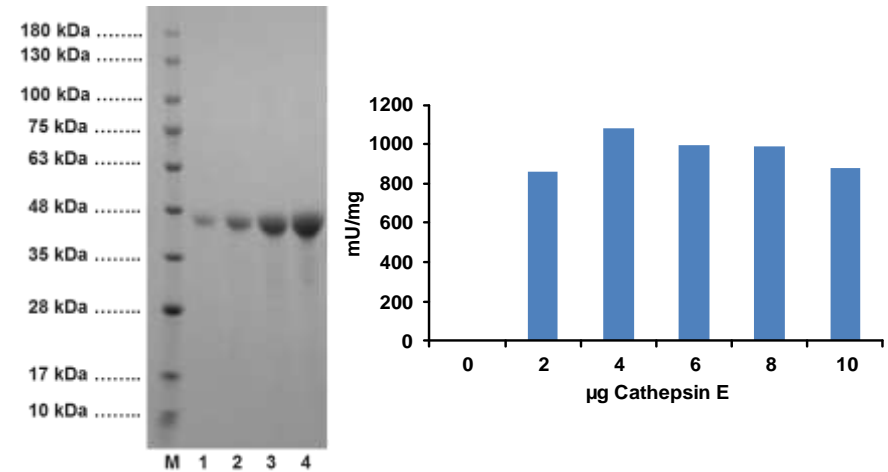
<b>CATALOG #:</b>	7842-50	50 µg
	7842-500	500 µg
<b>ALTERNATIVE NAMES:</b>	CTSE, Cathepsin E, Procathepsin E.	
<b>SOURCE:</b>	<i>E. coli</i>	
<b>FORM:</b>	Lyophilized.	
<b>FORMULATION:</b>	Lyophilized from 5 mg/ml solution in a proprietary buffer.	
<b>RECONSTITUTION:</b>	Reconstitute with water to 0.5-1 mg/ml. Aliquot and store at -20°C. Avoid repeated freezing and thawing cycles.	
<b>PURITY:</b>	≥90% by SDS-PAGE.	
<b>MOL. WT.:</b>	43.6 kDa (20-401 aa + N-terminal polyhistidine tag).	
<b>STORAGE CONDITIONS:</b>	Store at -20°C. Stable for at least 1 year as supplied.	

**BACKGROUND:** Cathepsin E (EC: 3.4.23.34) (CTSE) is an intracellular gastric aspartyl protease. It was originally identified as a cathepsin D-like acid protease. It is active in acidic conditions in a pH range from 2.5 to 5.5. *In vitro* experiments have identified several CTSE substrates including insulin beta chain, neurokinin, and FGF. Although the function of CTSE is not completely understood, it has been implicated in several physiological and pathological processes. CTSE is required for antigen presentation on class II MHC molecules. CTSE-deficient macrophages show abnormalities such as autophagy. Like many other cathepsins, CTSE has emerged as a therapy target for cancers, such as pancreatic ductal adenocarcinoma (PDAC). In addition to PDAC, CTSE is also overexpressed in gastric carcinomas and cervical and lung adenocarcinomas. The possible involvement of CTSE in neurodegeneration has also been reported. This protease has a specificity similar to that of pepsin A and cathepsin D. It is found in highest concentration in the surface of epithelial mucus-producing cells of the stomach. It is found in more than half of gastric cancers.

**SPECIFIC ACTIVITY:** BioVision's Procathepsin E/ Cathepsin E has a specific activity of >500 mU/mg. The Procathepsin E is auto activated to form Cathepsin E after reconstitution. BioVision's Procathepsin E/ Cathepsin E protein is more stable than a mixture of these proteins made from a non-E.Coli source.

**UNIT DEFINITION:** 1 U = 1 nmole/min digestion of Cathepsin E fluorogenic substrate Mca-GKPII FFRI K(Dnp)-R-NH<sub>2</sub> substrate in 50 mM sodium acetate, 0.5 M NaCl, pH 3.0 buffer

**APPLICATIONS:** Recombinant human Cathepsin E can be used in inhibitor screening assays, activity studies, selectivity profiling, western blotting, ELISA, and numerous similar applications.



## SDS-PAGE (4-20%) of Human Cathepsin E (CTSE):

M: Protein Marker  
 1: Human CTSE (5 µg)  
 2: Human CTSE (10 µg)  
 3: Human CTSE (15 µg)  
 4: Human CTSE (20 µg)

## Measurement of Human recombinant Cathepsin E (CTSE) activity by cleavage of a Cathepsin E fluorogenic peptide substrate.

## RELATED PRODUCTS:

- Cathepsin B, Active, human recombinant (Cat. No. 7580-5, -50, -1000)
- Cathepsin D (active, human) (Cat. No. 1022-5)
- Cathepsin G, Human Neutrophil (Cat. No. 4713-100)
- Cathepsin H (active, human) (Cat. No. 1023-5)
- 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 L, human recombinant (Cat. No. 1135-5, -100, -1000)
- Cathepsin S, Active, human recombinant (Cat. No. 7526-10, -50, -500)

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