

# Cathepsin S, Active, human recombinant

**CATALOG #:** 7526-10 10 µg  
 7526-50 50 µg  
 7526-500 500 µg

**ALTERNATIVE NAMES:** CTSS

**SOURCE:** *E. coli*

**FORM:** Lyophilized.

**FORMULATION:** Lyophilized from proprietary buffer.

**PURITY:** ≥90% by SDS-PAGE.

**MOL. WT.:** 23.9 kDa (115-331 aa)

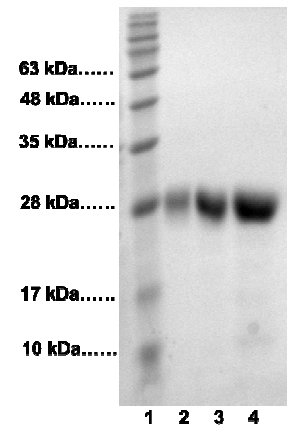
**STORAGE CONDITIONS:** Stable for at least 1 year as supplied. Briefly spin down the vial and reconstitute in 50 mM sodium acetate, 100 mM NaCl (pH 5.5) to 0.1-1 mg/ml and store at -80°C. Avoid repeated freeze and thaw cycles.

**BACKGROUND:** Cathepsin S (CTSS) is a lysosomal cysteine protease of the papain family and may participate in the degradation of antigenic proteins to peptides for presentation on MHC class II molecules. CTSS is synthesized as inactive precursor of 331 amino acids consisting of a 15-aa signal peptide, a propeptide of 99 aa, and a mature polypeptide of 217 aa. It is activated in the lysosomes by a proteolytic cleavage of the propeptide. The deduced amino acid sequence contains only one potential N-glycosylation site located in the propeptide. Compared with the abundant cathepsins B, L and H, cathepsin S shows a restricted tissue distribution, with highest levels in spleen, heart, and lung. In addition, evidences indicate that cathepsin S generates amyloid beta-peptide from amyloidogenic fragments of amyloid precursor protein (APP) in the endosomal/lysosomal compartment, and is implicated in the pathogenesis of Alzheimer's disease and Down Syndrome.

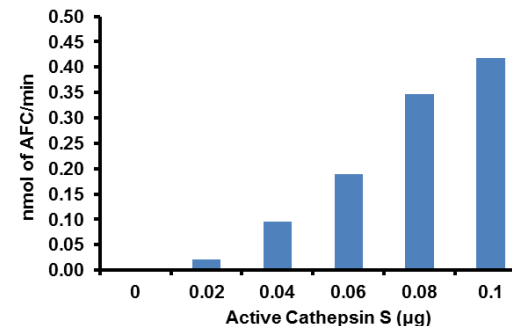
**ACTIVITY ASSAY:** BioVision's Active Cathepsin S has been prepared by auto-catalytic activation of Procathepsin S (Cat # 7525) at low pH. The enzyme is fully active as seen from its ability to cleave a fluorogenic substrate Z-VVR-AFC (K144-100).

**APPLICATIONS:** Active human Cathepsin S is useful in inhibitor screening, kinetic studies and cleavage of substrates *in vitro* or in tissue culture.

**SPECIFIC ACTIVITY:** >2000 mU/mg (1 U = Digestion of 1 µmole/min) of Ac-VVR-AFC



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



Measurement of h-Cathepsin S activity by Cathepsin S Activity Assay Kit (K144-100).

**RELATED PRODUCTS:**

- Procathepsin S, human recombinant (Cat. No. 7525-10, -50, -500)
- Human CellExp™ Cathepsin S, human recombinant (Cat. No. 7277-10, -50, -1000)
- Procathepsin B, human recombinant (Cat. No. 7579-10, -50, -1000)
- Cathepsin B, Active, human recombinant (Cat. No. 7580-5, -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)
- EZAct™ Procathepsin activation buffer (Cat. No. 1030-1)

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

