

Procathepsin S, human recombinant protein**CTSS****Catalog # PBV11137r****Specification**

Procathepsin S, human recombinant protein - Product info

Primary Accession

[P25774](#)

Calculated MW

38.1 kDa (17-331 aa + N-terminal poly-his tag) KDa**Procathepsin S, human recombinant protein - Additional Info**

Gene ID

1520

Gene Symbol

CTSS**Other Names****CTSS**

Gene Source

Human

Source

E. coli

Assay&Purity

SDS-PAGE; ≥90%

Assay2&Purity2

N/A;

Recombinant

Yes

Results

>1000 mU/mg (1 U = Digestion of 1 μmole/min) of Ac-VVR-AFC substrate (K144-100) after full activation.**Target/Specificity**

Procathepsin S

Application NotesReconstitute in 25 mM Na₂HPO₄, 500 mM NaCl (pH 7.0) to 0.5-1 mg/ml**Format**

Lyophilized

Storage

-80°C; Lyophilized from proprietary buffer.

Procathepsin S, human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

Procathepsin S, human recombinant protein - Images

Procathepsin S, human recombinant protein - 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.

Procathepsin S, human recombinant protein - References

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Shi G.-P.,et al.J. Biol. Chem. 269:11530-11536(1994).
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.