

# Active Human Cathepsin S

**CATALOG #:** 1025-5

**AMOUNT:** 5 µg

**LOT #:** \_\_\_\_\_

**BACKGROUND:** Like Cathepsins B, H, and L, Cathepsin S belongs to the group of lysosomal cysteine proteinases. Cathepsin S is found primarily in the spleen and in lung macrophages. Its level is elevated in the brain tissue of those with Alzheimer's disease and Down syndrome. Cathepsin S may function in the processing of amyloid precursor protein to amyloid beta peptides.

**SOURCE:** Purified from human spleen. Prepared from tissue shown to be non reactive for HbsAG, anti-HCV, anti-HBc, and negative for anti-HIV 1 & 2 by FDA approved tests.

**Form:** Lyophilized from 8.36 ul of 100 mM NaAc+1 mM EDTA, pH 5.5.

**Specific Activity:** 229.9 mU/mg using the method described by Kirche & Weiderlanders in Methods in Enzymology, **244**, 500-11 (1994)

One unit is defined as the amount of Cathepsin S which will hydrolyze Z-Val-Val-Arg-AMC in an assay buffer of 0.1 M KPO<sub>4</sub>, 5 mM disodium EDTA, pH 6.5 at 25°C, for 10 minutes. The assay is standardized so that 0.041 nmol AMC gives reading of 1000 RFU on the fluorescent reader GEMINI EM ROM V.1.10

**STORAGE CONDITIONS:** Store at -70°C, stable for at least 1 year as supplied. Avoid freeze/thaw cycles.

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

**REFERENCES:** Shi, G.P., et al. 1994. J. Biol. Chem. 15, 11530.  
Lemere, C.A., et al. 1995. Am J. Pathol. 146(4): 848.  
Munger, J. S., et al. 1995. Biochem. J. 311: 299.

**USAGE:** *For Research Use Only! Not to be used in human subjects!*

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