Procathepsin V (human), (recombinant) (Histag)

Full-length proenzyme. Can be activated in one step.

Cathepsin V, a member of the papain family of cysteine proteases, has 78% identity to cathepsin L, but unlike cathepsin L is not widely expressed, being localized to thymus, testis, corneal epithelium, and macrophages. It is a strong elastase, also cleaving proteins such as the invariant chain (Ii), plasminogen, and kininogen. It is implicated in disease states such as cancer, angiogenesis, atherosclerosis, and myasthenia gravis.

Citations: 1

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Ordering Information

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BML-SE554-0010

10µg

Manuals, SDS & CofA

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Handling & Storage

Use/Stability Avoid extended periods unfrozen. This enzyme is stable for 6 months when stored as

received under the above conditions.

Handling Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -80°C.

Long Term Storage -80°C

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name Cathepsin L2

Application NotesUseful tool to study enzyme kinetics, cleave target

substrates and screen for inhibitors.

Formulation Liquid. In 25mM TRIS-HCl, pH 8.0, containing 100mM

sodium chloride, 0.05% Tween-20 and 10% glycerol.

MW ~37kDa (SDS-PAGE)

Purity ≥90%

Source Produced in insect cells. Recombinant glycosylated

procathepsin V cloned from human cDNA and purified as

full-length proenzyme. Produced in a baculovirus

expression system.

Specific Activity 436 U/µg protein. One unit will hydrolyze one pmole Z-

Leu-Arg-AMC substrate (Prod. No. BML-P229, 25 μM) per minute at 25°C, in 25mM NaOAc pH 5.5, 100mM NaCl,

1.0mM DTT.

Technical Info / Product Notes

The proenzyme can be activated as in Adachi et al. (Reference year 2008): Dilute proenzyme into 200mM NaAcetate, pH 6.0, with 0.05% SDS, 2.5mM DTT, and incubate at 37°C for 5-30 minutes. Alternatively, preincubate proenzyme 5-30 minutes in assay buffer (25mM NaOAc pH 5.5, 100mM sodium chloride, 1.0mM DTT), then add substrate to begin assay. Incubation times must be determined empirically; activation is dependent on factors such as buffer, temperature, and enzyme concentration, and cathepsin V will autodegrade once activated.

UniProt ID

O60911

Last modified: May 29, 2024

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