Procathepsin V (human), (recombinant) (His-tag)

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.

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BML-SE554-0010	10µg

Manuals, SDS & CofA View Online »

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 Notes	Useful 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, pre-incubate 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

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