Recombinant Mouse Cathepsin Z Protein (His Tag)

Catalog Number: PKSM040872

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

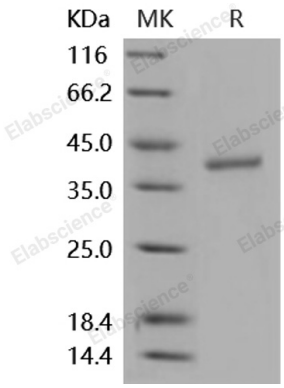
Description

Species	Mouse
Source	HEK293 Cells-derived Mouse Cathepsin Z protein Met 1-Val 306, with an C-terminal His
Calculated MW	33.2 kDa
Observed MW	38 kDa
Accession	NP_071720.1
Bio-activity	Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPPGFSAFK(Dnp)-OH (R&D Systems, Catalog # ES005). The specific activity is > 1, 200 pmoles/min/μg.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Cathepsin Z (CTSZ), also known as Cathepsin X or CATX, belongs to the C1 family of lysosomal cysteine proteases. Its gene structure and activity properties show several unique features that distinguish it clearly from other human cysteine proteases. It has a very short pro-region that shows no similarity to those of other cathepsins and a three-residue insertion motif that forms a characteristic ‘mini loop’. Cathepsin Z exhibits mono- and di-peptidase activity at its C-terminus, and in contrast to cathepsin B, it does not act as an endopeptidase. It is restricted to the cells of theimmune system, predominantly monocytes, macrophages and dendritic cells. Cathepsin Z is widely expressed in human tissues, suggesting that this enzyme could be involved in the normal intracellular protein degradation taking place in all cell types. It is capable to cleave regulatory motifs at C-terminus affecting the function of targeted molecules. Cathepsin X may regulate also the maturation of dendritic cells, a process, which is crucial in the initiation of adaptive immunity. Furthermore, higher levels of Cathepsin Z are also found in tumour and immune cells of prostate and gastric carcinomas and inmacrophages of gastric mucosa, especially after infection by Helicobacter pylori. Cathepsin Z is also ubiquitously distributed in cancer cell lines and in primary tumors from different sources, suggesting that this enzyme may participate in tumor progression.

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