Recombinant Human Cathepsin L2/CTSL2 Protein (His Tag)

Catalog Number: PKSH031883

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

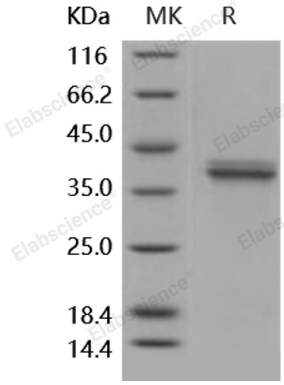
Description

Species	Human
Source	HEK293 Cells-derived Human Cathepsin L2/CTSL2 protein Met 1-Val 334, with an C-terminal His
Calculated MW	37.1 kDa
Observed MW	40 kDa
Accession	NP_001324.2
Bio-activity	Measured by its ability to cleave the fluorogenic peptide substrate Z-LR-AMC, (R &D Systems, Catalog # ES008). The specific activity is > 1000 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 V (CTSV), also known as Cathepsin L2, CTSL2, and CATL2, is a member of the peptidase C1 family. It is predominantly expressed in the thymus and testis. Cathepsin V is also expressed in corneal epithelium, and to a lesser extent in conjuctival epithelium and skin. It is a lysosomal cysteine proteinase that may play an important role in corneal physiology. It has about 75% protein sequence identity to murine cathepsin L. The fold of this enzyme is similar to the fold adopted by other members of the papain superfamily of cysteine proteases. Cathepsin V has been recently described as highly homologous to Cathepsin L and exclusively expressed in human thymus and testis. Cathepsin V is the dominant cysteine protease in cortical human thymic epithelial cells, while Cathepsin L and Cathepsin S seem to be restricted to dendritic and macrophage-like cells. Active Cathepsin V in thymic lysosomal preparations was demonstrated by active-site labeling. Recombinant Cathepsin V was capable of converting Ii into CLIP efficiently, suggesting that it is the protease that controls the generation of alphabeta-CLIP complexes in the human thymus. Cathepsin V is the third elastolytic cysteine protease which exhibits the most potent elastase activity yet described among human proteases and that it is present in atherosclerotic plaque specimens. Cathepsin L2 may play a specialized role in the thymus and testis. Expression analysis of cathepsin L2 in human tumors revealed a widespread expression in colorectal and breast carcinomas but not in normal colon or mammary gland or in peritumoral tissues.

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