



Recombinant Protein Technical Manual

Recombinant Human Cathepsin L2/CTSL2 Protein (His Tag)(Active) RPES2203

Product Data:

Product SKU: RPES2203

Size: 10µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_001324.2

Protein Information:

Molecular Mass: 37.1 kDa

AP Molecular Mass: 40 kDa

Tag: C-His

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.

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Cathepsin L2; Cathepsin U; Cathepsin V; CTSL2; CATL2; CTSU; CTSV

Immunogen Information:

Sequence: Met 1-Val 334

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 conjunctival 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 I α into CLIP efficiently, suggesting that it is the protease that controls the generation of α -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. Cathepsin L2 was also expressed by colorectal and breast cancer cell lines as well as by some tumors of diverse origin, including ovarian and renal carcinomas.