Data Sheet (Cat.No.TMPY-07185)

TargetMol

Cathepsin C Protein, Mouse, Recombinant (His)

General Information

Synonyms:	CatC;DPPI;Ctsc;DPP1
Protein Construction:	A DNA sequence encoding the mouse CTSC (NP_034112.3) precursor (Met1-Leu462) was expressed with a polyhistidine tag at the C-terminus.
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P97821
Molecular Weight:	51.2 kDa (predicted); 51.2 kDa (reducing contition)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95% as determined by SDS-PAGE. ≥ 90% as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20mM MES, 150mM Nacl, 10% Glycerol, 0.02% Tween 20, 10% Trehalose, pH 5.5. Please contact us for any concerns or special requirements. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

Preparation and Storage

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Cathepsins are proteases found in many types of cells conserved in all animals, which have a vital role in mammalian cellular turnover such as bone resorption. The lysosomal cysteine protease Cathepsin C (CTSC), also known as dipeptidyl peptidase I (DPPI/DPP1), activates a number of granule-associated serine proteases with pro-inflammatory and immune functions by removal of their inhibitory N-terminal dipeptides. This lysosomal exo-cysteine protease belonging to the peptidase C1 family. Active cathepsin C is found in lysosomes as a 200-kDa multimeric enzyme. Subunits constituting this assembly all arise from the proteolytic cleavage of a single precursor giving rise to three peptides: the propeptide, the alpha- and the beta-chains. It is a central coordinator for activation of many serine proteases in immune/inflammatory cells. Defects in the Cathepsin C have been

shown to be a cause of Papillon-Lefevre disease, an autosomal recessive disorder characterized by palmoplantar keratosis and periodontitis. Cathepsin C plays a key role in the activation of several degradative enzymes linked to tissue destruction in inflammatory diseases. Thus, it is a therapeutic target for the treatment of a number of inflammatory and autoimmune diseases.

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