# Recombinant Mouse Cathepsin A/CTSA Protein (His Tag)

**Catalog No.** PKSM040722

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

## Description

| | |
|---|---|
| **Synonyms** | AU019505;PPCA;Ppgb |
| **Species** | Mouse |
| **Expression Host** | HEK293 Cells |
| **Sequence** | Met 1-Tyr 474 |
| **Accession** | P16675-1 |
| **Calculated Molecular Weight** | 52.8 kDa |
| **Observed molecular weight** | 52.8 kDa |
| **Tag** | C-His |
| **Bioactivity** | Not validated for activity |

## Properties

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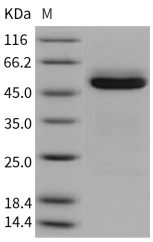
|---|---|
| **Purity** | > 96 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from sterile 25mM Tris, 0.3M NaCl, pH 8.0<br>Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

## Data




> 96 % as determined by reducing SDS-PAGE.

## Background

Lysosomal carboxypeptidase, cathepsin A (protective protein, CathA), is a component of the lysosomal multienzyme complex along with beta-galactosidase (GAL) and sialidase Neu1, where it activates Neu1 and protects GAL and Neu1



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against the rapid proteolytic degradation. Cathepsin A is a multicatalytic enzyme with deamidase and esterase in addition to carboxypeptidase activities. It was recently identified in human platelets as deamidase. In vitro, it hydrolyzes a variety of bioactive peptide hormones including tachykinins, suggesting that extralysosomal cathepsin A plays a role in regulation of bioactive peptide functions. It is a member of the alpha/beta hydrolase fold family and has been suggested to share a common ancestral relationship with other alpha/beta hydrolase fold enzymes, such as cholinesterases. Cathepsin A defects are linked to multiple forms of Galactosialidosis with a combined secondary deficiency of beta-galactosidase and neuraminidase. Cathepsin A is a key molecule in the onset of galactosialidosis and also highlight the therapeutic acts in vivo as an endothelin-1-inactivating enzyme and strongly confirm a crucial role of this enzyme in effective elastic fiber formation.



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