Recombinant Human Cathepsin A/CTSA Protein (His Tag)

Catalog Number: PKSH031576

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

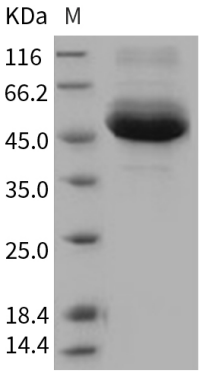
Description

Species	Human
Source	HEK293 Cells-derived Human Cathepsin A/CTSA protein Met 1-Tyr 480, with an C-terminal His
Calculated MW	53.0 kDa
Observed MW	53 kDa
Accession	NP_001121167.1
Bio-activity	Not validated for activity

Properties

Purity	> 90 % 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, 0.15mM NaCl, pH 7.5 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



> 90 % 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 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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