Recombinant Protein Technical Manual

Recombinant Human Cathepsin A/CTSA Protein (His Tag)

RPES4038

Product Data:

Product SKU: RPES4038

Size: 10µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_001121167.1

Protein Information:

Molecular Mass: 53 kDa

AP Molecular Mass: 53 kDa

Tag: C-His

Bio-activity:

Purity: > 90 % 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℃ 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

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

Application:

Synonyms: Lysosomal protective protein;CTSA;Carboxypeptidase C;Carboxypeptidase L;Cathepsin A;GLB2;GSL;NGBE;PPCA;PPGB

Immunogen Information:

Sequence: Met 1-Tyr 480

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-inactivating enzyme and strongly confirm a crucial role of this enzyme in effective elastic fiber formation.