

Human TPP1 / CLN2 Protein (His Tag)

Catalog Number: 13507-H08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CLN2; GIG1; LPIC; SCAR7; TPP-1

Protein Construction:

A DNA sequence encoding the pro form of human TPP1 (AAH14863.1) (Met 1-Pro 563) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by the cleavage of AlaAlaPheAMC. The specific activity is > 850 pmoles/min/ μ g.

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 20

Molecular Mass:

The secreted recombinant human TPP1 (pro form) comprises 554 amino acids and has a predicted molecular mass of 60.7 kDa. The apparent molecular mass of rhTPP1 is approximately 60 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

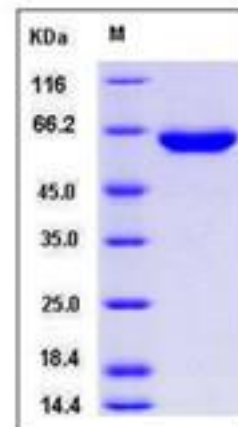
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Tripeptidyl-peptidase 1 (TPP1 / CLN2) is a member of the sedolisin family of serine proteases. The protease functions in the lysosome to cleave N-terminal tripeptides from substrates, and has weaker endopeptidase activity. It is synthesized as a catalytically-inactive enzyme which is activated and auto-proteolyzed upon acidification. TPP1 / CLN2 May act as a non-specific lysosomal peptidase which generates tripeptides from the breakdown products produced by lysosomal proteinases. Defects in TPP1 / CLN2 are the cause of neuronal ceroid lipofuscinosis type 2 (CLN2), a form of neuronal ceroid lipofuscinosis which is associated with the failure to degrade specific neuropeptides and a subunit of ATP synthase in the lysosome. Neuronal ceroid lipofuscinoses are progressive neurodegenerative, lysosomal storage diseases characterized by intracellular accumulation of autofluorescent liposomal material, and clinically by seizures, dementia, visual loss, and/or cerebral atrophy.

References

1. Xin H, *et al.* (2007) TPP1 is a homologue of ciliate TEBP-beta and interacts with POT1 to recruit telomerase. *Nature*. 445(7127): 559-62.
2. O'Connor MS, *et al.* (2006) A critical role for TPP1 and TIN2 interaction in high-order telomeric complex assembly. *Proc Natl Acad Sci U S A*. 103(32): 11874-9.
3. Abreu E, *et al.* (2010) TIN2-tethered TPP1 recruits human telomerase to telomeres in vivo. *Mol Cell Biol*. 30(12): 2971-82.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

For US Customer: Fax: 267-657-0217

• Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288

• Tel:+86-400-890-9989

• <http://www.sinobiological.com>