

Human CTHRC1 Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 11647-H08H

General Information

Gene Name Synonym:

CTHRC1

Protein Construction:

A DNA sequence encoding the human CTHRC1 (NP_612464.1) (Met 1-Lys 243) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

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 31

Molecular Mass:

The recombinant human CTHRC1 consists of 224 amino acids and has a predicted molecular mass of 24.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh CTHRC1 is approximately 28-33 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

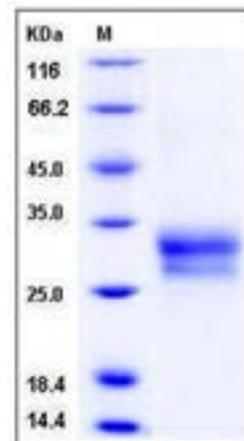
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Collagen triple helix repeat-containing protein 1, also known as Protein NMTC1, and CTHRC1, is a secreted protein that is glycosylated and highly conserved from lower chordates to mammals. CTHRC1 expression was not detectable in normal arteries. However, it is transiently expressed in the arterial wall in response to injury where it may contribute to vascular remodeling by limiting collagen matrix deposition and promoting cell migration. A short collagen motif with 12 Gly-X-Y repeats appears to be responsible for trimerization of the CTHRC1 protein and this renders the molecule susceptible to cleavage by collagenase. CTHRC1 overexpression caused a dramatic reduction in collagen type I mRNA and protein levels. Currently available data indicate that Cthrc1 expression in vascular cells regulates transforming growth factor beta responsiveness, thereby impacting transforming growth factor beta target genes, including collagens. Additionally, CTHRC1 increases bone mass as a positive regulator of osteoblastic bone formation and offers an anabolic approach for the treatment of osteoporosis.

References

1. Pyagay P, *et al.* (2005) Collagen triple helix repeat containing 1, a novel secreted protein in injured and diseased arteries, inhibits collagen expression and promotes cell migration. *Circ Res.* 96(2): 261-8.
2. Durmus T, *et al.* (2006) Expression analysis of the novel gene collagen triple helix repeat containing-1 (Cthrc1). *Gene Expr Patterns.* 6(8): 935-40.
3. LeClair R, *et al.* (2007) The role of collagen triple helix repeat containing 1 in injured arteries, collagen expression, and transforming growth factor beta signaling. *Trends Cardiovasc Med.* 17(6): 202-5.

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