

Human CCN4 / WISP1 Protein (His Tag)

Catalog Number: 10442-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

WISP1, CCN4, WISP1c, WISP1i, WISP1tc

Protein Construction:

A DNA sequence encoding the human WISP1 (NP_003873.1) (Met 1-Asn 367) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured in a cell proliferation assay using NRK-49F rat fibroblasts (Xu, L. et al., 2000, *Gene and Dev.* 14: 585.) . The ED50 for this effect is typically 10-25 µg/ml.

Endotoxin:

< 1.0 EU per µg 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: Thr 23

Molecular Mass:

The secreted recombinant human WISP1 consisting of 356 amino acids has a calculated molecular mass of 39 kDa. As a result of glycosylation, it migrates as an approximately 55 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

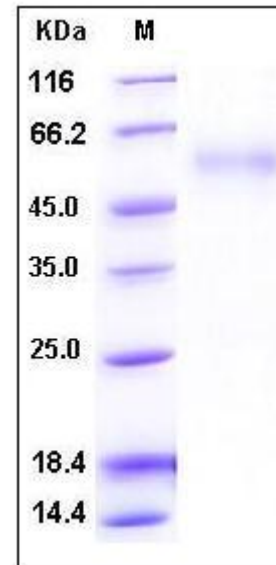
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

in the products.

Protein Description

WISP1 (WNT1 inducible signaling pathway protein 1), also named CCN4, is a secreted, heparin-binding glycoprotein, and belongs to the CCN (CTGF/CYR61/NOV) family. Members of the CCN family demonstrate high structural homology sharing four conserved cysteine-rich modular domains: a IGF1R (insulin-like growth factor-binding) domain, a von Willebrand type C domain, a thrombospondin domain and a C-terminal cysteine-knot domain. WISP1 is a putative downstream effector of the Wnt/PCP pathway that mediates diverse developmental processes, and also identified as a β -catenin-regulated gene, thus may contribute to Wnt-1-mediated tumorigenesis and malignancy. WISP1 is expressed at a high level in fibroblast cells, and overexpressed in colon tumors. It was reported that WISP1 interacts with sulfated glycoconjugates, decorin and biglycan in the ECM of connective tissue, and possibly prevents their inhibitory activity in tumor cell proliferation. It also attenuates p53-mediated apoptosis in response to DNA damage. However, a negatively regulated pathway by WISP1 involving integrins and Rac in the down-regulation of invasion was also illustrated. WISP1 variants lacking certain modules, generated by alternative splicing or gene mutations, have been implicated in various pathological conditions.

References

1. Pennica, D. et al., 1998, *Proc. Natl. Acad. Sci. USA.* 95: 14717-14722.
2. Desnoyers, L. et al., 2001, *J. Biol. Chem.* 276: 47599-47607.
3. Xu, L. et al., 2000, *Genes Dev.* 14: 585-595.
4. Soon, L.L. et al., 2003, *J. Biol. Chem.* 278: 11465-11470.
5. Yanagita, T. et al., 2007, *FEBS J.* 274: 1655-1665.
6. Tanaka, S. et al., 2001, *Oncogene.* 20: 5525-5532.

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