Human Contactin 1 / CNTN1 Protein (His Tag)

Catalog Number: **10383-H08H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

Contactin 1; F3; GP135; MYPCN; AW495098; CNTN; F3cam; usl

Protein Construction:

A DNA sequence encoding the amino acid residues (Met 1-993) of human CNTN1 (NP_001834.2) was expressed with the fused C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of C6 rat glial cells. When cells are added to CNTN1 coated plates (2 μg/ml, 100 μl/well), 35%-45% will adhere specifically after 60 minutes at 37℃ .

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 ℃

Predicted N terminal: Glu 21

Molecular Mass:

The secreted recombinant human CNTN1 comprises 984 amino acids after removal of the signal peptide and has a predicted molecular mass of 110 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhCNTN1 is approximately 125 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:

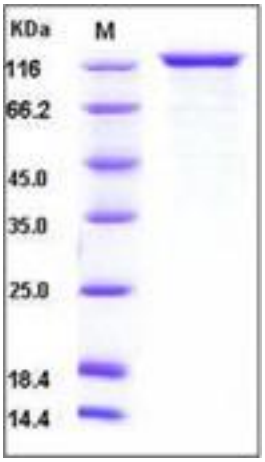
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Contactins are a subgroup of molecules belonging to the immunoglobulin superfamily that are expressed exclusively in the nervous system. The subgroup consists of six members: Contactin-1, Contactin-2 (TAG-1), Contactin-3 (BIG-1), BIG-2, Contactin-5 (NB-2) and NB-3. Since their identification in the late 1980s, Contactin-1 and Contactin-2 have been studied extensively. Axonal expression and the neurite extension activity of Contactin-1 and Contactin-2 attracted researchers to study the function of these molecules in axon guidance during development. Contactin-1 and Contactin-2 have come to be known as the principal molecules in the function and maintenance of myelinated neurons. In contrast, the function of the other four members of this subgroup remained unknown until recently. Contactin-1 is a cell surface adhesion molecule that is normally expressed by neurons and oligodendrocytes. Particularly high levels of Contactin-1 are present during brain development. Contactin-1 and Contactin-2 are differentially expressed in a number of neuronal tissues during development, and they interact with several ligands including Nr-CAM, L1, NCAM, neurocan, phosphacan, and tenascin. As a cell adhesion molecule, Contactin-1 plays a role in the formation of axon connections in the developing nervous system. It was demonstrated that Contactin-1 participates in signal pathways via its association with Contactin-associated protein (CNTNAP1), receptor protein tyrosine phosphatase beta (RPTPb) and NOTCH1. Contactin-1 is also involved in paranodal axo-glial junction formation and oligodendrocytes generation. Furthermore, studies indicated that Contactin-1 functions importantly in the invasion and metastasis of lung adenocarcinoma cells. Contactin-1 may also significantly influence the functional expression and distribution of Na+ channels in neurons.

References

1.Kazarinova NK, et al. (2001) Contactin associates with Na+ channels and increases their functional expression. J Neurosci. 21 (19):7517-25.
2.Eckerich C, et al. (2006) Contactin is expressed in human astrocytic gliomas and mediates repulsive effects. Glia. 53(1):1-12.
3.Su JL, et al. (2006) Knockdown of contactin-1 expression suppresses invasion and metastasis of lung adenocarcinoma. Cancer research 66 (5):2553-61.