Human Contactin 2 / CNTN2 Protein (His Tag)

Catalog Number: **10457-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

AXT; FAME5; TAG-1; TAX; TAX1

Protein Construction:

A DNA sequence encoding the human CNTN2 (NP_005067.1) precursor (Met 1-Asn 1012) was expressed 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 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: Ser 31

Molecular Mass:

The secreted recombinant human CNTN2 is a monomeric protein after cleavage of the signal peptide. It consists of 993 amino acids and predictes a molecular mass of 109 kDa. In SDS-PAGE under reducing conditions, it migrates with the apparent molecular mass of 140 kDa due to glycosylation.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5

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:

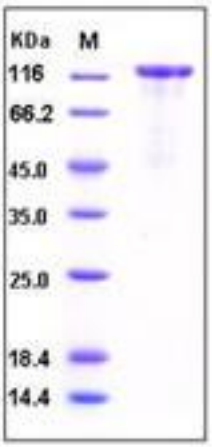
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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-2, also known as CNTN2, is a glycosylphosphatidylinositol (GPI)-anchored neuronal membrane protein that functions as a cell adhesion molecule. The human, rat, and chicken Contactin-2 are alternatively known as TAX1 (transiently-expressed axonal glycoprotein), TAG1 (transient axonal glycoprotein), and axonin-1, respectively. Human Contactin-2 shares approximately 91% and 75% amino acid sequence identity with rat and chicken Contactin-2, respectively. Contactin-2 is expressed by a subset of neuronal populations in the developing central nervous system (CNS) and peripheral nervous system (PNS). Contactin-2 is also expressed by oligodendrocytes and Schwann cells, which are myelinating glial cells of the CNS and PNS, respectively. Contactin-2 may play a role in the formation of axon connections in the developing nervous system. Contactin-2 is also involved in glial tumorigenesis and may provide a potential target for therapeutic intervention. During embryonic development, Contactin-2 interacts either in a homophilic, or heterophilic fashion with various transmembrane proteins.

References

1.Kyriakopoulou K, et al. (2002) A combination of chain and neurophilic migration involving the adhesion molecule TAG-1 in the caudal medulla. Development 129 (2):287-96. 2.Traka M, et al. (2002) The neuronal adhesion protein TAG-1 is expressed by Schwann cells and oligodendrocytes and is localized to the juxtaparanodal region of myelinated fibers. J Neurosci. 22(8):3016-24. 3.Traka M, et al. (2003) Association of TAG-1 with Caspr2 is essential for the molecular organization of juxtaparanodal regions of myelinated fibers. J Cell Biol. 162(6):1161-72.