



Recombinant Protein Technical Manual

Recombinant Human Contactin 1/CNTN1 Protein (His Tag)(Active) RPES3709

Product Data:

Product SKU: RPES3709

Size: 100µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_001834.2

Protein Information:

Molecular Mass: 110 kDa

AP Molecular Mass: 125 kDa

Tag: C-His

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°C.

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Contactin 1;F3;GP135;MYPCN

Immunogen Information:

Sequence: Met 1-993

Background:

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, Contactin-2 (TAG), Contactin-3 (BIG), BIG-2, Contactin-5 (NB-2) and NB-3. Since their identification in the late 1980s, Contactin and Contactin-2 have been studied extensively. Axonal expression and the neurite extension activity of Contactin and Contactin-2 attracted researchers to study the function of these molecules in axon guidance during development. Contactin 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 is a cell surface adhesion molecule that is normally expressed by neurons and oligodendrocytes. Particularly high levels of Contactin are present during brain development. Contactin 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 plays a role in the formation of axon connections in the developing nervous system. It was demonstrated that Contactin participates in signal pathways via its association with Contactin-associated protein (CNTNAP1), receptor protein tyrosine phosphatase beta (RPTPb) and NOTCH1. Contactin is also involved in paranodal axo-glial junction formation and oligodendrocytes generation. Furthermore, studies indicated that Contactin functions importantly in the invasion and metastasis of lung adenocarcinoma cells. Contactin may also significantly influence the functional expression and distribution of Na⁺ channels in neurons.