Human Contactin-4 Antibody

Monoclonal Mouse IgG_{2B} Clone # 296015

Catalog Number: MAB2205

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Contactin-4 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Contactin-2, -5, or recombinant mouse Contactin-3 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 296015
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Contactin-4 isoform 1 Asp19-Gly1001 Accession # Q8IWV2
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Contactin-4 (Catalog # 2205-CN)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Contactin-4 (CNTN4), also known as BIG-2 (Brain-derived Immunoglobulin Superfamily molecule 2), is an axonal cell adhesion molecule that belongs to the contactin family, a subfamily of the Ig superfamily (1-3). The contactin family comprises six members (CNTN1/F3, CNTN2/TAG-1, CNTN3/BIG-1, CNTN4/BIG-2, CNTN5/NB-2 and CNTN6/NB-3) and are characterized by the presence of six Ig-like domains, four fibronectin type III-like repeats, and a glycosylphosphatidylinositol (GPI)-anchoring domain. Contactin family proteins exist as membrane-bound proteins, but can also be released as soluble proteins by GPI-specific phospholipase D. Soluble Contactins are functionsl proteins that are able to promote neurite outgrowth. Human *CNTN4* has been mapped to chromosome 3p26-p25. Three alternative transcripts of *CNTN4,* encoding isoforms a, b, and c precursor proteins containing 1026, 282, and 698 amino acid (aa) residues, respectively, have been described. Human CNTN4 isoform a shares 94% aa sequence identity with its rat homolog. It also shares from 44-66% aa sequence identity with other CNTN family members. CNTN family members display overlapping but distinct expression patterns. CNTN4 expression is detected in multiple organs including brains, pancreas, kidney, aorta, small intestine, thyroid, uterus and testis. However, expression of the 282 aa isoform b is primarily restricted to the brain. CNTN4 has been suggested to play important roles in the formation of neuronal networks during nervous sytems development. Disruption of CNTN4 has been implicated in the 3p deletion syndrome characterized by growth failure, developmental delay, and mental retardation. CNTN-4 expression is induced in human neuroblastoma tumor cells treated with retinoic acid and may be responsible for the the neuritogenic response of tumor cells to retinoids.

References:

1. Fernandez, T. *et al.* (2004) Am. J. Genet. **74**:1286.
2. Hasnford, L.M. *et al.* (2003) Cytogenet. Genome Res. **101**:17.
3. Yoshihara, Y. *et al.* (1995) J. Neurobiology **28**:51.