

DESCRIPTION

Species Reactivity	Human
Specificity	Detects Contactin-4 isoform a in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) CNTN2, recombinant mouse CNTN3, and rhCNTN5 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Contactin-4 isoform a Asp19-Gly1001 Accession # Q8I WV2
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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 functional 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 systems 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 neurotogenic response of tumor cells to retinoids. R&D Systems' recombinant CNTN4 shows *in vitro* neurite outgrowth promoting activity when used as an immobilized substrate for hippocampal neuron outgrowth.

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