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Product Information

Anti-Contactin-2
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200250**

Product Description

Anti-Contactin-2 is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence located in the mid-region of human contactin-2 (GeneID 6900), conjugated to KLH. The corresponding sequence is highly conserved (90% sequence identity) in rat and mouse contactin-2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Contactin-2 specifically recognizes human contactin-2. The antibody can be used in several immunochemical techniques including immunoblotting (~135 kDa). Detection of the contactin-2 band by immunoblotting is specifically inhibited by the contactin-2 immunizing peptide.

Contactin-2 (also known as CNTN2, TAG-1, axonin-1, Tax, AXT), is an axonal glycoprotein of the neuronal cell adhesion molecule (N-CAM), immunoglobulin superfamily (IgSF). Contactin-2/TAG-1 is predominantly expressed during early neural development and is involved in axonal growth and pathfinding.[1-3] The transient expression of contactin-2 *in vivo* distinguishes it from other neuronal IgSF members, including N-CAM and contactin that are expressed on the surface of adult neurons. In the spinal cord, contactin-2 has been shown to be transiently expressed during the initial growth of motor, commissural and dorsal root ganglion (DRG) axons. Contactin-2 has also been shown to be expressed early postnatally in Schwann and oligodendrocyte cells, and is localized in juxtaparanodal region of the myelinated fibers both in the CNS and PNS.[2] Contactin-2 exists both as a GPI-linked cell-surface isoform and as a released form, which are differentially regulated by central and peripheral neurons. The neuronal and glial expression of contactin-2 is regulated after peripheral nerve lesion and central neurodegeneration of the adult nervous system.[4] Contactin-2 directed autoimmunity has been identified in multiple sclerosis (MS) patients.[5] Contactin-2/TAG-1 has been suggested to be a functional ligand for APP. The interaction between TAG-1 and APP triggers γ-secretase-dependent release of APP intracellular fragment (AICD), inducing a Fe65-dependent suppression of neurogenesis.[6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using lysates of HEK-293T cells over expressing human contactin-2.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Karagogeos, D., et al., *Development*, **112**, 51-67 (1991).
2. Traka, M., et al., *J. Neurosci.*, **22**, 3016-3024 (2002).
3. Law, C.O., et al., *Development*, **135**, 2361-2371 (2008).

4. Soares, S., et al., *Eur. J. Neurosci.*, **21**, 1169-1180 (2005).
5. Derfuss, T., et al., *Proc. Natl. Acad. Sci. USA*, **106**, 8302-8307 (2009).
6. Ma, Q.H., et al., *Nat. Cell Biol.*, **10**, 283-294 (2008).

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