SANTA CRUZ BIOTECHNOLOGY, INC.

Contactin 4 (H-43): sc-68856



BACKGROUND

Contactin 4 is a 1,026 amino acid protein encoded by the human gene CNTN4. Contactin 4 belongs to the immunoglobulin superfamily and is a member of the Contactin family. Contactin 4 contains four Fibronectin type-3 domains and six Ig-like C2-type domains, and has three isoforms (1, 2 and 3). Defects in the CNTN4 gene are a cause of 3p deletion syndrome (3PDS). 3PDS is a rare contiguous gene disorder involving the loss of the telomeric portion of the short arm of chromosome 3 and is characterized by developmental delay, growth retardation and dysmorphic features. Contactin 4 is primarily expressed in brain tissue. Highest expression has been found in the cerebellum, with lowest levels found in corpus callosum, caudate nucleus, amygdala and spinal cord. Some expression is also found in testis, pancreas, thyroid, uterus, small intestine and kidney. Contactin 4 is not believed to be expressed in skeletal muscle. Isoform 2 is weakly expressed in cerebral cortex.

REFERENCES

- Mimmack, M.L., Saito, H., Evans, G., Bresler, M., Keverne, E.B. and Emson, P.C. 1997. A novel splice variant of the cell adhesion molecule BIG-2 is expressed in the olfactory and vomeronasal neuroepithelia. Brain Res. Mol. Brain Res. 47: 345-350.
- Zeng, L., Zhang, C., Xu, J., Ye, X., Wu, Q., Dai, J., Ji, C., Gu, S., Xie, Y. and Mao, Y. 2002. A novel splice variant of the cell adhesion molecule Contactin 4 (CNTN4) is mainly expressed in human brain. J. Hum. Genet. 47: 497-499.
- Hansford, L.M., Smith, S.A., Haber, M., Norris, M.D., Cheung, B. and Marshall, G.M. 2003. Cloning and characterization of the human neural cell adhesion molecule, CNTN4 (alias BIG-2). Cytogenet. Genome Res. 101: 17-23.
- Fernandez, T., Morgan, T., Davis, N., Klin, A., Morris, A., Farhi, A., Lifton, R.P. and State, M.W. 2004. Disruption of Contactin 4 (CNTN4) results in developmental delay and other features of 3p deletion syndrome. Am. J. Hum. Genet. 74: 1286-1293.
- Liu, T., Qian, W.J., Gritsenko, M.A., Monroe, M.E., Moore, R.J. and Smith, R.D. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. J. Proteome Res. 4: 2070-2080.
- Dijkhuizen, T., van Essen, T., van der Vlies, P., Verheij, J.B., Sikkema-Raddatz, B., van der Veen, A.Y., Gerssen-Schoorl, K.B., Buys, C.H. and Kok, K. 2006. FISH and array-CGH analysis of a complex chromosome 3 aberration suggests that loss of CNTN4 and CRBN contributes to mental retardation in 3pter deletions. Am. J. Med. Genet. A 140: 2482-2487.
- Rivera, H., Domínguez, M.G. and Matute, E. 2007. Follow-up of an intelligent odd-mannered teenager with del(3)(p26). Remarks on authorship and ethical commitment. Genet. Couns. 17: 401-405.

CHROMOSOMAL LOCATION

Genetic locus: CNTN4 (human) mapping to 3p26.3; Cntn4 (mouse) mapping to 6 E1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

Contactin 4 (H-43) is a rabbit polyclonal antibody raised against amino acids 838-880 mapping near the C-terminus of Contactin 4 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Contactin 4 (H-43) is recommended for detection of Contactin 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Contactin 4 (H-43) is also recommended for detection of Contactin 4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Contactin 4 siRNA (h): sc-62138, Contactin 4 siRNA (m): sc-62139, Contactin 4 shRNA Plasmid (h): sc-62138-SH, Contactin 4 shRNA Plasmid (m): sc-62139-SH, Contactin 4 shRNA (h) Lentiviral Particles: sc-62138-V and Contactin 4 shRNA (m) Lentiviral Particles: sc-62139-V.

Molecular Weight of Contactin 4: 113 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.