

Contactin 2 siRNA (m): sc-43088

BACKGROUND

Contactin 2 (CNTN2, transiently-expressed axonal glycoprotein, AXT, TAX, TAX-1, TAG-1, Axonin-1) is a neuronal cell adhesion molecule (CAM) that influences the formation of axon connections in the developing nervous system. Contactin 2 is a member of the immunoglobulin superfamily (IgSF) and contains a glycosylphosphatidylinositol-anchor, six immunoglobulin (Ig)-like and four Fibronectin type III (FNIII)-like domains. Contactin 2 is expressed predominantly during neural development on the cell membrane of axons in nerve fiber tracts in order to guide commissural axons without promoting their growth. Contactin 2 binds with NgCAM in the plane of the same membrane (*cis*-binding). The Contactin 2 heterophilic (Contactin 2/NgCAM and Contactin 2/NrCAM) binding sites are localized to the first four Ig domains. The Contactin 2 homophilic (Contactin 2/Contactin 2) binding site is localized to the FNIII domain.

REFERENCES

1. Kozlov, S.V., et al. 1995. The human TAX-1 gene encoding the axon-associated cell adhesion molecule TAG-1/Axonin-1: genomic structure and basic promoter. *Genomics* 30: 141-148.
2. Wolfer, D.P., et al. 1998. Expression of the axon growth-related neural adhesion molecule TAG/Axonin-1 in the adult mouse brain. *Anat. Embryol.* 197: 177-185.
3. Kunz, S., et al. 1998. Neurite fasciculation mediated by complexes of Axonin-1 and Ng cell adhesion molecule. *J. Cell Biol.* 143: 1673-1690.
4. Lustig, M., et al. 1999. NrCAM promotes neurite outgrowth from peripheral ganglia by a mechanism involving Axonin-1 as a neuronal receptor. *Dev. Biol.* 209: 340-351.
5. Fitzli, D., et al. 2000. A direct interaction of Axonin-1 with NgCAM-related cell adhesion Molecule (NrCAM) results in guidance, but no growth of commissural axons. *J. Cell Biol.* 149: 951-968.
6. Freigang, J., et al. 2000. The crystal structure of the ligand binding module of Axonin-1/TAG-1 suggests a zipper mechanism for neural cell adhesion. *Cell* 101: 425-433.

CHROMOSOMAL LOCATION

Genetic locus: Cntn2 (mouse) mapping to 1 E4.

PRODUCT

Contactin 2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Contactin 2 shRNA Plasmid (m): sc-43088-SH and Contactin 2 shRNA (m) Lentiviral Particles: sc-43088-V as alternate gene silencing products.

For independent verification of Contactin 2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-43088A, sc-43088B and sc-43088C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Contactin 2 siRNA (m) is recommended for the inhibition of Contactin 2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Contactin 2 (F-1): sc-376780 is recommended as a control antibody for monitoring of Contactin 2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Contactin 2 gene expression knockdown using RT-PCR Primer: Contactin 2 (m)-PR: sc-43088-PR (20 μ l, 566 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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