SANTA CRUZ BIOTECHNOLOGY, INC.

Contactin 4 siRNA (m): sc-62139

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, six Ig-like C2-type domains, and has three isoforms. 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 to be 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

1. Mimmack, M.L., et al. 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.
2. Zeng, L., et al. 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.
3. Hansford, L.M., et al. 2003. Cloning and characterization of the human neural cell adhesion molecule, CNTN4 (alias BIG-2). Cytogenet. Genome Res. 101: 17-23.
4. Fernandez, T., et al. 2004. Disruption of contactin 4 (CNTN4) results in developmental delay and other features of 3p deletion syndrome. Am. J. Hum. Genet. 74: 1286-1293.
5. Liu, T., et al. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. J. Proteome Res. 4: 2070-2080.
6. Dijkhuizen, T., et al. 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 140A: 2482-2487.

CHROMOSOMAL LOCATION

Genetic locus: Cntn4 (mouse) mapping to 6 E1.

PRODUCT

Contactin 4 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Contactin 4 shRNA Plasmid (m): sc-62139-SH and Contactin 4 shRNA (m) Lentiviral Particles: sc-62139-V as alternate gene silencing products.

For independent verification of Contactin 4 (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-62139A, sc-62139B and sc-62139C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Contactin 4 siRNA (m) is recommended for the inhibition of Contactin 4 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 µM in 66 µl. 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Contactin 4 gene expression knockdown using RT-PCR Primer: Contactin 4 (m)-PR: sc-62139-PR (20 µl). 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.