SANTA CRUZ BIOTECHNOLOGY, INC.

DNTNP siRNA (m): sc-143129

BACKGROUND

Dorsal neural-tube nuclear protein (DNTNP), also known as FAM53A, is a 398 amino acid nuclear protein. DNTNP is thought to play an important role in neural development by specifying dorsal cell fates within the neural tube. Widely expressed in the dorsal neural tube, DNTNP is most highly expressed in the dorsal regions of the midbrain, the hindbrain, the diencephalon and the spinal neural tube and is expressed at lower levels in the branchial arches, the telencephalon, the heart, and somites of developing embryos. DNTNP is encoded by a gene located on chromosome 4 which contains many genes including the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease.

REFERENCES

1. Jun, L., Balboni, A.L., Laitman, J.T. and Bergemann, A.D. 2002. Isolation of DNTNP, which encodes a potential nuclear protein that is expressed in the developing, dorsal neural tube. Dev. Dyn. 224: 116-123.
2. Hillier, L.W., Graves, T.A., Fulton, R.S., Fulton, L.A., Pepin, K.H., Minx, P., Wagner-McPherson, C., Layman, D., Wylie, K., Sekhon, M., Becker, M.C., Fewell, G.A., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
3. Bergemann, A.D., Cole, F. and Hirschhorn, K. 2005. The etiology of Wolf-Hirschhorn syndrome. Trends Genet. 21: 188-195.
4. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.

CHROMOSOMAL LOCATION

Genetic locus: Fam53a (mouse) mapping to 5 B2.

PRODUCT

DNTNP siRNA (m) is a pool of 2 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 DNTNP shRNA Plasmid (m): sc-143129-SH and DNTNP shRNA (m) Lentiviral Particles: sc-143129-V as alternate gene silencing products.

For independent verification of DNTNP (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-143129A and sc-143129B.

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

DNTNP siRNA (m) is recommended for the inhibition of DNTNP 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 DNTNP gene expression knockdown using RT-PCR Primer: DNTNP (m)-PR: sc-143129-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.