SANTA CRUZ BIOTECHNOLOGY, INC.

TorsinB siRNA (h): sc-92951

BACKGROUND

TorsinB, also known as TOR1B, DQ1 or FKSG18, is a 336 amino acid protein that localizes to the lumen of endoplasmic reticulum and belongs to the Torsin family. Expressed in a variety of tissues with particularly high levels in adult brain, TorsinB is thought to function as a molecular chaperone that assists in the conformational folding of membrane and secreted proteins. Via its ability to regulate protein folding, TorsinB plays a key role in postnatal developmental events and is essential for proper neurological development. TorsinB contains two PKC (protein kinase C) phosphorylations sites, one ATP binding domain and several conserved cysteines and shares 69% amino acid identity with TorsinA, a related family member. Defects in the gene encoding TorsinB are associated with torsion dystonia, an autosomal dominant neurological disorder that is characterized by debilitating muscle contractions throughout the body.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TOR1B (human) mapping to 9q34.11.

PRODUCT

TorsinB siRNA (h) 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 TorsinB shRNA Plasmid (h): sc-92951-SH and TorsinB shRNA (h) Lentiviral Particles: sc-92951-V as alternate gene silencing products.

For independent verification of TorsinB (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92951A, sc-92951B and sc-92951C.

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

TorsinB siRNA (h) is recommended for the inhibition of TorsinB expression in human 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 TorsinB gene expression knockdown using RT-PCR Primer: TorsinB (h)-PR: sc-92951-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.