

RoXaN siRNA (h): sc-76427

BACKGROUND

RoXaN (zinc finger CCCH-type containing 7B), is a 993 amino acid protein likely involved in translational regulation whose alternative names include rotavirus "X"-associated non-structural protein, ubiquitous tetratricopeptide containing protein RoXaN, ZC3H7B, FLJ13787, KIAA1031, or DKFZp434K0920. RoXaN localizes to the nucleus and has been identified as a novel cellular protein-binding partner for the rotavirus nonstructural protein NSP3, which is involved in rotavirus replication. RoXaN's nuclear localization is known to appear disguised upon infection with rotavirus A. Two RoXaN isoforms exist as a result of alternative splicing, and RoXaN also contains one C₂H₂-type zinc finger, three TPR repeats and four C3H1-type zinc fingers. RoXaN contains one paxillin leucine-aspartate repeat (LD) motif in addition to a coiled-coil region which assist in protein-protein interactions. The gene encoding RoXaN maps to human chromosome 22q13.1.

REFERENCES

1. Vende, P., Piron, M., Castagne, N. and Poncet, D. 2000. Efficient translation of rotavirus mRNA requires simultaneous interaction of NSP3 with the eukaryotic translation initiation factor eIF4G and the mRNA 3' end. *J. Virol.* 74: 7064-7071.
2. Patton, J.T. 2001. Rotavirus RNA replication and gene expression. *Novartis Found. Symp.* 238: 64-77.
3. Vitour, D., Lindenbaum, P., Vende, P., Becker, M.M. and Poncet, D. 2004. RoXaN, a novel cellular protein containing TPR, LD, and zinc finger motifs, forms a ternary complex with eukaryotic initiation factor 4G and rotavirus NSP3. *J. Virol.* 78: 3851-3862.
4. Harb, M., Becker, M.M., Vitour, D., Baron, C.H., Vende, P., Brown, S.C., Bolte, S., Arold, S.T. and Poncet, D. 2008. Nuclear localization of cytoplasmic poly(A)-binding protein upon rotavirus infection involves the interaction of NSP3 with eIF4G and RoXaN. *J. Virol.* 82: 11283-11293.

CHROMOSOMAL LOCATION

Genetic locus: ZC3H7B (human) mapping to 22q13.2.

PRODUCT

RoXaN 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RoXaN shRNA Plasmid (h): sc-76427-SH and RoXaN shRNA (h) Lentiviral Particles: sc-76427-V as alternate gene silencing products.

For independent verification of RoXaN (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-76427A, sc-76427B and sc-76427C.

PROTOCOLS

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

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

RoXaN siRNA (h) is recommended for the inhibition of RoXaN 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RoXaN gene expression knockdown using RT-PCR Primer: RoXaN (h)-PR: sc-76427-PR (20 μ l). 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.