SANTA CRUZ BIOTECHNOLOGY, INC.

Syne-1 siRNA (m): sc-61629

BACKGROUND

Synaptic nuclear envelope protein-1 (Syne-1) is a member of the Golgi- and nuclear envelope-localized spectrin family, and it facilitates retrograde vesicular trafficking from the Golgi to the ER. Syne-1 is a 8,797 amino acid protein that contains several spectrin repeats similar to those in dystrophin and utrophin, two tandem calponin homology domains at its N-terminus, as well as a domain that is homologous to the C-terminal of Klarsicht, a *Drosophila* protein associated with nuclei and necessary for a few nuclear migrations. Syne-1 localizes to the Golgi apparatus and nuclear envelope until cytokinesis, when it migrates to the central spindle and midbody, where it functions together with KIF3B to assist the accumulation of the membrane vesicles at the spindle midbody.

REFERENCES

1. Apel, E.D., Lewis, R.M., Grady, R.M. and Sanes, J.R. 2000. Syne-1, a dystrophin- and Klarsicht-related protein associated with synaptic nuclei at the neuromuscular junction. J. Biol. Chem. 275: 31986-31995.
2. Zhang, Q., Skepper, J.N., Yang, F., Davies, J.D., Hegyi, L., Roberts, R.G., Weissberg, P.L., Ellis, J.A. and Shanahan, C.M. 2002. Nesprins: a novel family of spectrin-repeat-containing proteins that localize to the nuclear membrane in multiple tissues. J. Cell Sci. 114: 4485-4498.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608441. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Gough, L.L., Fan, J., Chu, S., Winnick, S. and Beck, K.A. 2003. Golgi localization of Syne-1. Mol. Biol. Cell 14: 2410-2424.
5. Fan, J. and Beck, K.A. 2004. A role for the spectrin superfamily member Syne-1 and kinesin II in cytokinesis. J. Cell Sci. 117: 619-629.

CHROMOSOMAL LOCATION

Genetic locus: Syne1 (mouse) mapping to 10 A1.

PRODUCT

Syne-1 siRNA (m) is a pool of 4 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 Syne-1 shRNA Plasmid (m): sc-61629-SH and Syne-1 shRNA (m) Lentiviral Particles: sc-61629-V as alternate gene silencing products.

For independent verification of Syne-1 (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-61629A, sc-61629B, sc-61629C and sc-61629D.

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 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

Syne-1 siRNA (m) is recommended for the inhibition of Syne-1 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.

RESEARCH USE

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