SANTA CRUZ BIOTECHNOLOGY, INC.

KIF25 siRNA (h): sc-95243

BACKGROUND

The kinesins constitute a large family of microtubule-dependent motor proteins, which are responsible for the distribution of numerous organelles, vesicles and macromolecular complexes throughout the cell. Individual kinesin members play crucial roles in cell division, intracellular transport and membrane trafficking events including endocytosis and transcytosis. KIF25 (kinesin family member 25), also designated Kinesin-like protein 3 (KNSL3) is a 384 amino acid protein that contains one N-terminal kinesin-motor domain, which is responsible for the ATP-dependent movement of KIF25 across microtubules. The gene encoding KIF25 produces alternatively spliced transcripts, which are ubiquitously expressed.

REFERENCES

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3. Brady, S.T. 1995. A kinesin medley: biochemical and functional heterogeneity. Trends Cell Biol. 5: 159-164.
4. Hamm-Alvarez, S.F. 1998. Molecular motors and their role in membrane traffic. Adv. Drug Deliv. Rev. 29: 229-242.
5. Okamoto, S., Matsushima, M. and Nakamura, Y. 1998. Identification, genomic organization, and alternative splicing of KNSL3, a novel human gene encoding a kinesin-like protein. Cytogenet. Cell Genet. 83: 25-29.
6. Miki, H., Setou, M., Kaneshiro, K. and Hirokawa, N. 2001. All kinesin superfamily protein, KIF, genes in mouse and human. Proc. Natl. Acad. Sci. USA 98: 7004-7011.
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CHROMOSOMAL LOCATION

Genetic locus: KIF25 (human) mapping to 6q27.

PRODUCT

KIF25 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 KIF25 shRNA Plasmid (h): sc-95243-SH and KIF25 shRNA (h) Lentiviral Particles: sc-95243-V as alternate gene silencing products.

For independent verification of KIF25 (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-95243A, sc-95243B and sc-95243C.

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

KIF25 siRNA (h) is recommended for the inhibition of KIF25 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 KIF25 gene expression knockdown using RT-PCR Primer: KIF25 (h)-PR: sc-95243-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.