SANTA CRUZ BIOTECHNOLOGY, INC.

KIF7 siRNA (h): sc-89962

BACKGROUND

The kinesins constitute a large family of microtubule-dependent motor proteins that 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. KIF7 (kinesin family member 7) is a 1,343 amino acid protein expressed in embryonic stem cells, melanotic melanoma and Jurkat T-cells. KIF7 is a member of the KIF27 subfamily of the kinesin-like protein family and contains one kinesin-motor domain. It is suggested that KIF7 may participate in the Hedgehog (Hh) signaling pathway by regulating the proteolysis and stability of GLI transcription factors. Hedgehog (Hh) signaling plays a critical role in embryonic development.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: KIF7 (human) mapping to 15q26.1.

PROTOCOLS

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

PRODUCT

KIF7 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 KIF7 shRNA Plasmid (h): sc-89962-SH and KIF7 shRNA (h) Lentiviral Particles: sc-89962-V as alternate gene silencing products.

For independent verification of KIF7 (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-89962A, sc-89962B and sc-89962C.

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

KIF7 siRNA (h) is recommended for the inhibition of KIF7 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.

GENE EXPRESSION MONITORING

KIF7 (3F8): sc-517550 is recommended as a control antibody for monitoring of KIF7 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KIF7 gene expression knockdown using RT-PCR Primer: KIF7 (h)-PR: sc-89962-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.