SANTA CRUZ BIOTECHNOLOGY, INC.

Exportin 6 siRNA (m): sc-144982

BACKGROUND

Exportins, which recruit cargo to the nucleoplasm, preferentially bind their substrates at high RanGTP concentrations in the nucleus and exit the nucleus as trimeric cargo-Exportin-RanGTP complexes. These complexes are then disassembled via the hydrolysis of GTP. Exportin 6, also known as RANBP20 or XPO6, is a 1,125 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one importin N-terminal domain. Existing in a complex with Profilin-1 and β-Actin, Exportin 6 functions to mediate the nuclear export of Actin-associated protein structures in somatic cells. The gene encoding Exportin 6 maps to human chromosome 16, which houses over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

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2. Nagase, T., et al. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
3. Gibbon, B.C., et al. 1998. Pollen profilin function depends on interaction with proline-rich motifs. Plant Cell 10: 981-993.
4. Riou, P., et al. 2002. Investigation in liver tissues and cell lines of the transcription of 13 genes mapping to the 16q24 region that are frequently deleted in hepatocellular carcinoma. Clin. Cancer Res. 8: 3178-3186.
5. Stüven, T., et al. 2003. Exportin 6: a novel nuclear export receptor that is specific for profilin.actin complexes. EMBO J. 22: 5928-5940.
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CHROMOSOMAL LOCATION

Genetic locus: Xpo6 (mouse) mapping to 7 F3.

PRODUCT

Exportin 6 siRNA (m) 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 Exportin 6 shRNA Plasmid (m): sc-144982-SH and Exportin 6 shRNA (m) Lentiviral Particles: sc-144982-V as alternate gene silencing products.

For independent verification of Exportin 6 (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-144982A, sc-144982B and sc-144982C.

RESEARCH USE

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

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

Exportin 6 siRNA (m) is recommended for the inhibition of Exportin 6 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Exportin 6 gene expression knockdown using RT-PCR Primer: Exportin 6 (m)-PR: sc-144982-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.