SANTA CRUZ BIOTECHNOLOGY, INC.

Importin-9 siRNA (h): sc-78631

BACKGROUND

The Importin complex consists of Importin-α and Importin-β proteins which assist in transport of arginine- or serine-rich (SR) proteins across the nucleus. Importin-9, also known as Imp9 or IPO9, is a 1,041 amino acid protein that contains one importin N-terminal domain and belongs to the Importin-β family. Localized to both the nucleus and the cytoplasm, Importin-9 functions as a nuclear transport receptor that mediates the docking of the Importin complex to the nuclear pore complex (NPC). Importin-9 mediates nuclear import of H2B histone, Ribosomal Protein S7 and Ribosomal Protein L18A. The gene encoding Importin-9 is located on human chromosome 1, the largest human chromosome that spans about 260 million base pairs and makes up 8% of the human genome.

REFERENCES

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3. Jäkel, S., et al. 2002. Importins fulfil a dual function as nuclear import receptors and cytoplasmic chaperones for exposed basic domains. EMBO J. 21: 377-386.
4. Lubert, E.J., et al. 2003. Interaction between protein phosphatase 2A and members of the importin β superfamily. Biochem. Biophys. Res. Commun. 303: 908-913.
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7. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
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CHROMOSOMAL LOCATION

Genetic locus: IPO9 (human) mapping to 1q32.1.

PRODUCT

Importin-9 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 Importin-9 shRNA Plasmid (h): sc-78631-SH and Importin-9 shRNA (h) Lentiviral Particles: sc-78631-V as alternate gene silencing products.

For independent verification of Importin-9 (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-78631A, sc-78631B and sc-78631C.

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

Importin-9 siRNA (h) is recommended for the inhibition of Importin-9 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 Importin-9 gene expression knockdown using RT-PCR Primer: Importin-9 (h)-PR: sc-78631-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.

PROTOCOLS

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