SANTA CRUZ BIOTECHNOLOGY, INC.

karyopherin β2B siRNA (h): sc-97580

BACKGROUND

Transportin 2, also known as TNPO2, IPO3, TRN2 or KPNB2B (karyopherin β-2b), is an 897 amino acid protein that contains one importin N-terminal domain and 13 HEAT repeats. Localized to both the nucleus and the cytoplasm, transportin 2 is thought to function as a nuclear transport receptor that is specific for nuclear localization signals (NLS) in cargo substrates. Playing an important role in nuclear protein import, transportin 2 mediates docking of the importin complex to the nuclear pore complex (NPC), an event that is necessary for protein import into the nucleus. In addition to its ability to facilitate nuclear protein import, transportin 2 may participate in protein export from the nucleus to the cytoplasm. Multiple isoforms of transportin 2 exist due to alternative splicing events.

REFERENCES

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4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603002. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: TNPO2 (human) mapping to 19p13.2.

PRODUCT

karyopherin β2B 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 karyopherin β2B shRNA Plasmid (h): sc-97580-SH and karyopherin β2B shRNA (h) Lentiviral Particles: sc-97580-V as alternate gene silencing products.

For independent verification of karyopherin β2B (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-97580A, sc-97580B and sc-97580C.

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

karyopherin β2B siRNA (h) is recommended for the inhibition of karyopherin β2B 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

karyopherin β2/2B (A-11): sc-365179 is recommended as a control antibody for monitoring of karyopherin β2B 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor karyopherin β2B gene expression knockdown using RT-PCR Primer: karyopherin β2B (h)-PR: sc-97580-PR (20 µl, 456 bp). 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.