SANTA CRUZ BIOTECHNOLOGY, INC.

ANKT siRNA (m): sc-141122

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The Power to Question

BACKGROUND

ANKT, also known as LNP, SAPL, NUSAP or NUSAP1 (nucleolar and spindle associated protein 1), is a 441 amino acid nucleolar-spindle-associated protein that localizes to the cytoplasm and nucleolus during interphase and redistributes to the mitotic spindle in prometaphase. Member of the NUSAP family, ANKT is also considered a microtubule-associated protein with the capacity to bundle and stabilize microtubules. ANKT may associate with chromosomes and promote the organization of mitotic spindle microtubules. ANKT is tightly regulated by the APC/C (anaphase-promoting complex/cyclosome) ubiquitin ligase complex, a complex that targets cyclin B and associated factors regulating sister chromatid separation for proteolysis by the proteasome and, consequently, regulates metaphase-anaphase transition and exit from mitosis.

REFERENCES

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3. Raemaekers, T., et al. 2003. NuSAP, a novel microtubule-associated protein involved in mitotic spindle organization. J. Cell Biol. 162: 1017-1029.
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5. Fujiwara, T., et al. 2006. Expression analyses and transcriptional regulation of mouse nucleolar spindle-associated protein gene in erythroid cells: essential role of NF-Y. Br. J. Haematol. 135: 583-590.
6. Ribbeck, K., et al. 2006. NuSAP, a mitotic RanGTP target that stabilizes and cross-links microtubules. Mol. Biol. Cell 17: 2646-2660.
7. Li, L., et al. 2007. NuSAP is degraded by APC/C-Cdh1 and its overexpression results in mitotic arrest dependent of its microtubules' affinity. Cell. Signal. 19: 2046-2055.
8. Ribbeck, K., et al. 2007. A role for NuSAP in linking microtubules to mitotic chromosomes. Curr. Biol. 17: 230-236.

CHROMOSOMAL LOCATION

Genetic locus: Nusap1 (mouse) mapping to 2 E5.

PRODUCT

ANKT siRNA (m) is a pool of 2 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 ANKT shRNA Plasmid (m): sc-141122-SH and ANKT shRNA (m) Lentiviral Particles: sc-141122-V as alternate gene silencing products.

For independent verification of ANKT (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-141122A and sc-141122B.

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

ANKT siRNA (m) is recommended for the inhibition of ANKT 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 ANKT gene expression knockdown using RT-PCR Primer: ANKT (m)-PR: sc-141122-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.