SANTA CRUZ BIOTECHNOLOGY, INC.

Katanin p60 A1 siRNA (h): sc-95345

BACKGROUND

Microtubules are polymers of α and β subunits that form the mitotic spindle and assist in the organization of membranous organelles during interphase. Katanin p60 A1, also known as KATNA1, is a 491 amino acid protein that belongs to the AAA ATPase family and is involved in microtubule regulation. Localized to the cytoplasm and to the centrosome, Katanin p60 A1 functions to sever and disassemble microtubules in an ATP-dependent manner, thus promoting the rapid reorganization of cellular microtubule arrays and playing an important role in microtubule release from the centrosome after nucleation. Katanin p60 A1, which exists as two alternatively spliced isoforms, can homoligomerize into hexameric rings whose activity is stimulated by the presence of microtubules.

REFERENCES

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7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606696. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: KATNA1 (human) mapping to 6q25.1.

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.

PRODUCT

Katanin p60 A1 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 Katanin p60 A1 shRNA Plasmid (h): sc-95345-SH and Katanin p60 A1 shRNA (h) Lentiviral Particles: sc-95345-V as alternate gene silencing products.

For independent verification of Katanin p60 A1 (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-95345A, sc-95345B and sc-95345C.

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

Katanin p60 A1 siRNA (h) is recommended for the inhibition of Katanin p60 A1 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 Katanin p60 A1 gene expression knockdown using RT-PCR Primer: Katanin p60 A1 (h)-PR: sc-95345-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.