SANTA CRUZ BIOTECHNOLOGY, INC.

Plk1s1 siRNA (m): sc-141862

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The Power to Question

BACKGROUND

Kizuna (centrosomal protein kizuna), also known as PLK1S1 (polo-like kinase 1 substrate 1) or KIZ, is a 673 amino acid protein that belongs to the kizuna family. Kizuna, meaning "bonds" in Japanese, is important for the establishment of a strong mitotic centrosome that can withstand the forces which converge on the centrosome during spindle formation. Kizuna also aids in the stabilization of pericentriolar material around the centriole. Localizing to the centrosome, Kizuna interacts with CEP72, AKAP9, ODF2, GCP2 and PCNT throughout the cell cycle. Once the centrosome has been duplicated, Kisuna usually resides with the mother centrosome and the older centriole as well as the surrounding proteins. Kizuna is post-translationally phosphorylated at multiple sites and exists as five alternatively spliced isoforms. The gene encoding Kizuna maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Kiz (mouse) mapping to 2 G2.

PRODUCT

Plk1s1 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 Plk1s1 shRNA Plasmid (m): sc-141862-SH and Plk1s1 shRNA (m) Lentiviral Particles: sc-141862-V as alternate gene silencing products.

For independent verification of Plk1s1 (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-141862A, sc-141862B and sc-141862C.

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

Plk1s1 siRNA (m) is recommended for the inhibition of Plk1s1 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 Plk1s1 gene expression knockdown using RT-PCR Primer: Plk1s1 (m)-PR: sc-141862-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.