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Sgo2 siRNA (m): sc-153423

BACKGROUND

Sgo2 (shugoshin-2), also known as SGOL2 (shugoshin-like 2), is a 1,265 amino acid protein that cooperates with PPP2CA to protect centromeric cohesin from separase-mediated cleavage in oocytes specifically during meiosis I. Sgo2 belongs to the shugoshin family, which is Japanese for guardian spirit. Sgo2 has a crucial role in protecting REC8 at centromeres from cleavage by separase. During meiosis, protects centromeric cohesin complexes until metaphase II/anaphase II transition, preventing premature release of meiosis-specific REC8 cohesin complexes from anaphase I centromeres. The Sgo2 protein is thus essential for an accurate gametogenesis. The Sgo2 protein is also essential for recruiting KIF2C to the inner centromere and for correcting defective kinetochore attachments. Existing as three alternatively spliced isoforms, the Sgo2 gene is conserved in bovine, mouse and rat, and maps to human chromosome 2q33.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Sgol2 (mouse) mapping to 1 C1.3.

PROTOCOLS

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

PRODUCT

Sgo2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sgo2 shRNA Plasmid (m): sc-153423-SH and Sgo2 shRNA (m) Lentiviral Particles: sc-153423-V as alternate gene silencing products.

For independent verification of Sgo2 (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-153423A, sc-153423B and sc-153423C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Sgo2 siRNA (m) is recommended for the inhibition of Sgo2 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 μ M in 66 μ l. 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 Sgo2 gene expression knockdown using RT-PCR Primer: Sgo2 (m)-PR: sc-153423-PR (20 μ l). 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.