SANTA CRUZ BIOTECHNOLOGY, INC.

SLX1 siRNA (m): sc-145409

BACKGROUND

SLX1, also known as structure-specific endonuclease subunit SLX1 or GIYD1 (GIY-YIG domain containing 1), is a 275 amino acid nuclear protein belonging to the SLX1 family. SLX1 forms a heterodimer with SLX4 and the catalytic subunit of the SLX1-SLX4 structure-specific endonuclease resolves DNA secondary structures generated during DNA repair and recombination. It is suggested that SLX1 has endonuclease activity towards branched DNA substrates, introducing single-strand cuts in duplex DNA. SLX1 targets 5'-flap structures and promotes symmetrical cleavage of static and migrating Holliday junctions (HJs). SLX1 resolves HJs by generating two pairs of ligatable, nicked duplex products. Existing as two isoforms produced by alternative splicing events, SLX1 is encoded by gene located on human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slx1b (mouse) mapping to 7 F3.

PROTOCOLS

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

PRODUCT

SLX1 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 SLX1 shRNA Plasmid (m): sc-145409-SH and SLX1 shRNA (m) Lentiviral Particles: sc-145409-V as alternate gene silencing products.

For independent verification of SLX1 (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-145409A, sc-145409B and sc-145409C.

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

SLX1 siRNA (m) is recommended for the inhibition of SLX1 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 SLX1 gene expression knockdown using RT-PCR Primer: SLX1 (m)-PR: sc-145409-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.