SANTA CRUZ BIOTECHNOLOGY, INC.

PRIM2A siRNA (h): sc-95096

BACKGROUND

In eukaryotic cells, the replication of DNA is carried out by a variety of proteins and requires a complex chromosomal replication structure, of which POLA2 (DNA polymerase α) and DNA primases (PRIMs) are key components. PRIM2A (primase, DNA, polypeptide 2A), also known as p58, is a 509 amino acidprotein that exists as a heterodimer with PRIM1, another DNA primase. Together, PRIM2A and PRIM1 function to synthesize small RNA primers that are required for the proper activity of Okazaki fragments during replication of the DNA lagging strand. Multiple isoforms of PRIM2A exist due to alternative splicing events. The gene encoding PRIM2A maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PRIM2 (human) mapping to 6p11.2.

PROTOCOLS

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

PRODUCT

PRIM2A 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 PRIM2A shRNA Plasmid (h): sc-95096-SH and PRIM2A shRNA (h) Lentiviral Particles: sc-95096-V as alternate gene silencing products.

For independent verification of PRIM2A (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-95096A, sc-95096B and sc-95096C.

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

PRIM2A siRNA (h) is recommended for the inhibition of PRIM2A 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 PRIM2A gene expression knockdown using RT-PCR Primer: PRIM2A (h)-PR: sc-95096-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.