SANTA CRUZ BIOTECHNOLOGY, INC.

RY1 siRNA (h): sc-94954

BACKGROUND

RY1, also known as SNRNP27 (small nuclear ribonucleoprotein 27 kDa (U4/U6.U5)), is a 155 amino acid protein that belongs to the SNUT3 family and is part of a tri-snRNP complex. RY1 is a serine/arginine-rich (SR) protein. SR proteins play important roles in pre-mRNA splicing by facilitating the recognition and selection of splice sites. RY1 associates with the 25S U4/U6.U5 tri-snRNP, a major component of the U2-type spiceosome. The expression of the RY1 gene may be altered in cells infected with the human T-cell lymphotropic virus type 1 (HTLV-1) retrovirus. RY1 is phosphorylated upon DNA damage, probably by ATM or ATR, and also *in vitro* by snRNP-associated protein kinase. The RY1 gene is conserved in canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans, A. thaliana* and rice, and maps to human chromosome 2p13.3. A pseudogene of the RY1 gene is located on the long arm of chromosome 5.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SNRNP27 (human) mapping to 2p13.3.

PRODUCT

RY1 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 RY1 shRNA Plasmid (h): sc-94954-SH and RY1 shRNA (h) Lentiviral Particles: sc-94954-V as alternate gene silencing products.

For independent verification of RY1 (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-94954A, sc-94954B and sc-94954C.

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

RY1 siRNA (h) is recommended for the inhibition of RY1 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 RY1 gene expression knockdown using RT-PCR Primer: RY1 (h)-PR: sc-94954-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.

PROTOCOLS

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