SANTA CRUZ BIOTECHNOLOGY, INC.

POLR2K siRNA (h): sc-62836

BACKGROUND

RNA polymerase II (Pol II) is a multi-subunit enzyme responsible for the transcription of protein-coding genes. Transcription initiation requires recruitment of the complete transcription machinery to a promoter via solicitation by activators and chromatin remodeling factors. Pol II can coordinate 10 to 14 subunits. This complex interacts with the promoter regions of genes and a variety of elements and transcription factors. POLR2K (polymerase (RNA) II (DNA directed) polypeptide K), also known as RPB12, RPABC4, RPB7.0, hRPB7.0, hsRPB10a, RPB10α or ABC10-α, is a 58 amino acid nuclear protein belonging to the archaeal rpoP/eukaryotic RPC10 RNA polymerase subunit family. The gene encoding POLR2K is located on human chromosome 8q22.2, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: POLR2K (human) mapping to 8q22.2.

PROTOCOLS

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

PRODUCT

POLR2K siRNA (h) is a pool of 2 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 POLR2K shRNA Plasmid (h): sc-62836-SH and POLR2K shRNA (h) Lentiviral Particles: sc-62836-V as alternate gene silencing products.

For independent verification of POLR2K (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-62836A and sc-62836B.

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

POLR2K siRNA (h) is recommended for the inhibition of POLR2K 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 POLR2K gene expression knockdown using RT-PCR Primer: POLR2K (h)-PR: sc-62836-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.