

UPRT siRNA (h): sc-91090

BACKGROUND

UPRT (uracil phosphoribosyltransferase (FUR1) homolog (*S. cerevisiae*)), also known as UPP or FUR1, is a 309 amino acid cytoplasmic and nuclear protein that is highly expressed in leukocytes, liver, spleen and thymus, with lower expression in brain, lung and skeletal muscle. A member of the UPRTase family, UPRT catalyzes the conversion of uracil and 5-phosphoribosyl-1-R-diphosphate to uridine monophosphate (UMP), which is a critical step during nucleotide metabolism, specifically in the pyrimidine salvage pathway. UPRT is considered a potential target for treating parasitic infections and cancer. UPRT exists as three alternatively spliced isoforms and is encoded by a gene located on human chromosome X. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes. Color blindness, hemophilia and Duchenne muscular dystrophy are well known X chromosome-linked conditions that affect males more frequently, as males carry a single X chromosome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: UPRT (human) mapping to Xq13.3.

PROTOCOLS

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

PRODUCT

UPRT 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UPRT shRNA Plasmid (h): sc-91090-SH and UPRT shRNA (h) Lentiviral Particles: sc-91090-V as alternate gene silencing products.

For independent verification of UPRT (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-91090A, sc-91090B and sc-91090C.

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

UPRT siRNA (h) is recommended for the inhibition of UPRT 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 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 UPRT gene expression knockdown using RT-PCR Primer: UPRT (h)-PR: sc-91090-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.