SANTA CRUZ BIOTECHNOLOGY, INC.

USP51 siRNA (h): sc-76871

BACKGROUND

The ubiquitin pathway involves three sequential enzymatic steps that facilitate the conjugation of ubiquitin and ubiquitin-like molecules to specific protein substrates. Through the use of a wide range of enzymes that can add or remove ubiquitin, the ubiquitin pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. USP51 (ubiquitin specific processing protease 51), also designated ubiquitin carboxyl-terminal hydrolase 51, ubiquitin thioesterase 51 or deubiquitinating enzyme 51, is a 711 amino acid protein that belongs to the peptidase C19 family. Expressed in prostate, brain, lung, aorta and kidney, USP51 functions to catalyze the conversion of a ubiquitin C-terminal thioester and water to free ubiquitin and a thiol, a reaction that may play a role in signaling events throughout the cell.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: USP51 (human) mapping to Xp11.21.

PRODUCT

USP51 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 USP51 shRNA Plasmid (h): sc-76871-SH and USP51 shRNA (h) Lentiviral Particles: sc-76871-V as alternate gene silencing products.

For independent verification of USP51 (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-76871A, sc-76871B and sc-76871C.

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

USP51 siRNA (h) is recommended for the inhibition of USP51 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 USP51 gene expression knockdown using RT-PCR Primer: USP51 (h)-PR: sc-76871-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.