SANTA CRUZ BIOTECHNOLOGY, INC.

PADI6 siRNA (h): sc-88155

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The Power to Question

BACKGROUND

Peptidylarginine deiminases (PADs) make up a family of posttranslational protein modification enzymes that convert arginine residues to citrulline residues in the presence of calcium ions. PADI6 (protein arginine deiminase type-6) is a 686 amino acid nuclear and cytoplasmic protein that belongs to the protein arginine deiminase family. Aside from catalyzing the deimination of arginine residues in proteins, PADI6 may be involved in cytoskeletal reorganization in egg and early embryo. PADI6 is expressed in ovary, testis and peripheral blood leukocytes. The gene that encodes PADI6 consists of approximately 29,455 bases and maps to human chromosome 1p36.13. Comprising nearly 8% of the human genome, chromosome 1 spans 260 million base pairs, contains over 3,000 genes and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

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CHROMOSOMAL LOCATION

Genetic locus: PADI6 (human) mapping to 1p36.13.

PRODUCT

PADI6 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 PADI6 shRNA Plasmid (h): sc-88155-SH and PADI6 shRNA (h) Lentiviral Particles: sc-88155-V as alternate gene silencing products.

For independent verification of PADI6 (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-88155A, sc-88155B and sc-88155C.

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

PADI6 siRNA (h) is recommended for the inhibition of PADI6 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 PADI6 gene expression knockdown using RT-PCR Primer: PADI6 (h)-PR: sc-88155-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.