SANTA CRUZ BIOTECHNOLOGY, INC.

WDR3 siRNA (h): sc-78573

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The Power to Question

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Containing ten WD repeats, WDR3 (WD repeat-containing protein 3), also known as DIP2 or UTP12, is a 943 amino acid protein that belongs to the WD repeat WDR3/UTP12 family. Localizing to the nucleus, WDR3 is ubiquitously expressed. The gene encoding WDR3 maps to human chromosome 1p12; this region has been associated with thyroid cancer susceptability. The WDR3 gene may play a role in genome stability, specifically in thyroid cancer patients.

REFERENCES

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3. Wang, Y., Du, D., Fang, L., Yang, G., Zhang, C., Zeng, R., Ullrich, A., Lottspeich, F. and Chen, Z. 2006. Tyrosine phosphorylated Par3 regulates epithelial tight junction assembly promoted by EGFR signaling. EMBO J. 25: 5058-5070.
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5. García-Quispes, W.A., Pastor, S., Galofre, P., Biarnes, J., Castell, J., Velázquez, A. and Marcos, R. 2012. Possible role of the WDR3 gene on genome stability in thyroid cancer patients. PLoS ONE 7: e44288.

CHROMOSOMAL LOCATION

Genetic locus: WDR3 (human) mapping to 1p12.

PRODUCT

WDR3 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 WDR3 shRNA Plasmid (h): sc-78573-SH and WDR3 shRNA (h) Lentiviral Particles: sc-78573-V as alternate gene silencing products.

For independent verification of WDR3 (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-78573A, sc-78573B and sc-78573C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

WDR3 siRNA (h) is recommended for the inhibition of WDR3 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 WDR3 gene expression knockdown using RT-PCR Primer: WDR3 (h)-PR: sc-78573-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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