SANTA CRUZ BIOTECHNOLOGY, INC.

WDR68 siRNA (h): sc-93712

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. WDR68 (WD repeat-containing protein 68), also known as DCAF7 (DDB1- and CUL4-associated factor 7), HAN11 or WDR68, is a 342 amino acid protein that belongs to the WD repeat DCAF7 family and contains four WD repeats. Localizing to the cytoplasm and nucleus, WDR68 is involved in protein modification and ubiquitination pathways, and interacts directly with Dyrk1A, Dyrk1B and Dia 1. WDR68 is involved in craniofacial development, and may be involved in skin development.

REFERENCES

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2. Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
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4. Smith, T.F., Gaitatzes, C., Saxena, K. and Neer, E.J. 1999. The WD repeat: a common architecture for diverse functions. Trends Biochem. Sci. 24: 181-185.
5. Skurat, A.V. and Dietrich, A.D. 2004. Phosphorylation of Ser640 in muscle glycogen synthase by DYRK family protein kinases. J. Biol. Chem. 279: 2490-2498.
6. Morita, K., Lo Celso, C., Spencer-Dene, B., Zouboulis, C.C. and Watt, F.M. 2006. HAN11 binds mDia1 and controls GLI1 transcriptional activity. J. Dermatol. Sci. 44: 11-20.
7. Miyata, Y. and Nishida, E. 2011. DYRK1A binds to an evolutionarily conserved WD40-repeat protein WDR68 and induces its nuclear translocation. Biochim. Biophys. Acta 1813: 1728-1739.

CHROMOSOMAL LOCATION

Genetic locus: DCAF7 (human) mapping to 17q23.3.

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.

PRODUCT

WDR68 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 WDR68 shRNA Plasmid (h): sc-93712-SH and WDR68 shRNA (h) Lentiviral Particles: sc-93712-V as alternate gene silencing products.

For independent verification of WDR68 (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-93712A, sc-93712B and sc-93712C.

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

WDR68 siRNA (h) is recommended for the inhibition of WDR68 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 WDR68 gene expression knockdown using RT-PCR Primer: WDR68 (h)-PR: sc-93712-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.