

WDR34 siRNA (m): sc-155276

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 such as chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. WDR34 (WD repeat domain 34) is a 536 amino acid protein containing five WD repeats. WDR34 is considered a novel TAB1-associated inhibitor of the IL-1R/TLR3/TLR4-induced NF κ B activation pathway. WDR34 is encoded by a gene located on human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
2. Garcia-Higuera, I., et al. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. *Biochemistry* 35: 13985-13994.
3. Garcia-Higuera, I., Gaitatzes, C., Smith, T.F. and Neer, E.J. 1998. Folding a WD repeat propeller. Role of highly conserved aspartic acid residues in the G protein β subunit and Sec13. *J. Biol. Chem.* 273: 9041-9049.
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. Li, D. and Roberts, R. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. *Cell. Mol. Life Sci.* 58: 2085-2097.
6. Hudson, A.M. and Cooley, L. 2008. Phylogenetic, structural and functional relationships between WD- and Kelch-repeat proteins. *Subcell. Biochem.* 48: 6-19.
7. Gao, D., Wang, R., Li, B., Yang, Y., Zhai, Z. and Chen, D.Y. 2009. WDR34 is a novel TAK1-associated suppressor of the IL-1R/TLR3/TLR4-induced NF κ B activation pathway. *Cell. Mol. Life Sci.* 66: 2573-2584.

CHROMOSOMAL LOCATION

Genetic locus: Wdr34 (mouse) mapping to 2 B.

PRODUCT

WDR34 siRNA (m) 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 WDR34 shRNA Plasmid (m): sc-155276-SH and WDR34 shRNA (m) Lentiviral Particles: sc-155276-V as alternate gene silencing products.

For independent verification of WDR34 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-155276A, sc-155276B and sc-155276C.

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

WDR34 siRNA (m) is recommended for the inhibition of WDR34 expression in mouse 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 WDR34 gene expression knockdown using RT-PCR Primer: WDR34 (m)-PR: sc-155276-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.

PROTOCOLS

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