

# WIRE siRNA (m): sc-155351

## BACKGROUND

WIRE, also known as WIPF2 (WAS/WASL interacting protein family, member 2) or WICH, is a 440 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains one WH2 domain. Expressed ubiquitously with highest expression in colon, brain, lung and stomach, WIRE functions as an N-WASP-interacting protein that plays an important role in the organization and mobilization of the Actin cytoskeleton. Additionally, WIRE is involved in the formation of cell surface protrusions and may also provide a link between the cytoskeletal machinery and PDGF-B receptors. Multiple alternatively spliced isoforms of WIRE exist and are encoded by a gene that maps to human chromosome 17q21.1.

## REFERENCES

1. Fukuoka, M., Suetsugu, S., Miki, H., Fukami, K., Endo, T. and Takenawa, T. 2001. A novel neural Wiskott-Aldrich syndrome protein (N-WASP) binding protein, WISH, induces Arp2/3 complex activation independent of Cdc42. *J. Cell Biol.* 152: 471-482.
2. Nonoyama, S. 2001. Wiskott-Aldrich syndrome (role of WASP). *J. Med. Dent. Sci.* 48: 1-6.
3. Kato, M., Miki, H., Kurita, S., Endo, T., Nakagawa, H., Miyamoto, S. and Takenawa, T. 2002. WICH, a novel verprolin homology domain-containing protein that functions cooperatively with N-WASP in Actin-microspike formation. *Biochem. Biophys. Res. Commun.* 291: 41-47.
4. Aspenström, P. 2002. The WASP-binding protein WIRE has a role in the regulation of the Actin filament system downstream of the platelet-derived growth factor receptor. *Exp. Cell Res.* 279: 21-33.
5. Aspenström, P. 2004. The mammalian verprolin homologue WIRE participates in receptor-mediated endocytosis and regulation of the Actin filament system by distinct mechanisms. *Exp. Cell Res.* 298: 485-498.
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## CHROMOSOMAL LOCATION

Genetic locus: Wipf2 (mouse) mapping to 11 D.

## PRODUCT

WIRE 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see WIRE shRNA Plasmid (m): sc-155351-SH and WIRE shRNA (m) Lentiviral Particles: sc-155351-V as alternate gene silencing products.

For independent verification of WIRE (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-155351A, sc-155351B and sc-155351C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

WIRE siRNA (m) is recommended for the inhibition of WIRE 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  $\mu$ M in 66  $\mu$ 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 WIRE gene expression knockdown using RT-PCR Primer: WIRE (m)-PR: sc-155351-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.