

Mena siRNA (h): sc-43496

BACKGROUND

The Wiskott-Aldrich syndrome (WAS) is characterized by thrombocytopenia, eczema, defects in cell-mediated and humoral immunity and a propensity for lymphoproliferative diseases. The syndrome is the result of a mutation in the gene encoding a proline-rich protein termed WASP. WASP is a down-stream effector of Cdc42 and has been implicated in Actin polymerization and cytoskeletal organization. Distantly related proteins, VASP (vasodilator-stimulated phosphoprotein) and Mena (for mammalian enabled protein), are involved in the regulation of cytoskeletal dynamics. Both Mena and VASP accumulate at focal adhesions. Mena is highly expressed in the developing nervous system and may be involved in growth cone motility and axon guidance.

REFERENCES

1. Reinhard, M., et al. 1992. The 46/50 kDa phosphoprotein VASP purified from human platelets is a novel protein associated with Actin filaments and focal contacts. *EMBO J.* 11: 2063-2070.
2. Remold-O'Donnell, E., et al. 1996. Defects in Wiskott-Aldrich syndrome blood cells. *Blood* 87: 2621-2631.
3. Stewart, D.M., et al. 1996. Studies of the expression of the Wiskott-Aldrich syndrome protein. *J. Clin. Invest.* 97: 2627-2634.
4. Symons, M., et al. 1996. Wiskott-Aldrich syndrome protein, a novel effector for the GTPase CDC42Hs, is implicated in Actin polymerization. *Cell* 84: 723-734.
5. Kolluri, R., et al. 1996. Direct interaction of the Wiskott-Aldrich syndrome protein with the GTPase Cdc42. *Proc. Natl. Acad. Sci. USA* 93: 5615-5618.
6. Schindelhauer, D., et al. 1996. Wiskott-Aldrich syndrome: no strict genotype-phenotype correlations but clustering of missense mutations in the amino-terminal part of the WASP gene product. *Hum. Genet.* 98: 68-76.
7. Gertler, F.B., et al. 1996. Mena, a relative of VASP and *Drosophila* enabled, is implicated in the control of microfilament dynamics. *Cell* 87: 227-239.
8. Lanier, L.M., et al. 1999. Mena is required for neurulation and commissure formation. *Neuron* 22: 313-325.

CHROMOSOMAL LOCATION

Genetic locus: ENAH (human) mapping to 1q42.12.

PRODUCT

Mena 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Mena shRNA Plasmid (h): sc-43496-SH and Mena shRNA (h) Lentiviral Particles: sc-43496-V as alternate gene silencing products.

For independent verification of Mena (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-43496A, sc-43496B and sc-43496C.

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

Mena siRNA (h) is recommended for the inhibition of Mena 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 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.

GENE EXPRESSION MONITORING

Mena (21): sc-135988 is recommended as a control antibody for monitoring of Mena gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Mena gene expression knockdown using RT-PCR Primer: Mena (h)-PR: sc-43496-PR (20 μ l, 438 bp). 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.