



Moesin siRNA (m): sc-35956

BACKGROUND

Ezrin, Moesin and Radixin belong to a family of highly homologous Actin-associated proteins that are localized just beneath the plasma membrane. These proteins are believed to be involved in the mediation of interactions between cytoskeletal and membrane proteins. Ezrin serves as a major cytoplasmic substrate of various protein-tyrosine kinases, including the epidermal growth factor receptor. Ezrin has also been identified as a cAMP-dependent protein kinase (A-kinase) anchoring protein and designated AKAP 78. Moesin and Radixin share more than 70% homology with Ezrin and are coexpressed within various cell types. Despite the high degree of homology, the three proteins exhibit a distinct receptor-specific pattern of phosphorylation.

REFERENCES

1. Gould, K.L., et al. 1989. cDNA cloning and sequencing of the protein-tyrosine kinase substrate, Ezrin, reveals homology to band 4.1. *EMBO J.* 8: 4133-4142.
2. Lankes, W.T. and Furthmayr, H. 1991. Moesin: a member of the protein 4.1-Talin-Ezrin family of protein. *Proc. Natl. Acad. Sci. USA* 88: 8297-8301.
3. Sato, N., et al. 1992. A gene family consisting of Ezrin, Radixin and Moesin. Its specific localization at Actin filament/plasma membrane association sites. *J. Cell Sci.* 103: 131-143.
4. Algrain, M., et al. 1993. Ezrin contains cytoskeleton and membrane binding domains accounting for its proposed role as a membrane-cytoskeletal linker. *J. Cell Biol.* 120: 129-139.

CHROMOSOMAL LOCATION

Genetic locus: Msn (mouse) mapping to X C3.

PRODUCT

Moesin 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 Moesin shRNA Plasmid (m): sc-35956-SH and Moesin shRNA (m) Lentiviral Particles: sc-35956-V as alternate gene silencing products.

For independent verification of Moesin (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-35956A, sc-35956B and sc-35956C.

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

Moesin siRNA (m) is recommended for the inhibition of Moesin 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.

GENE EXPRESSION MONITORING

Moesin (E-10): sc-13122 is recommended as a control antibody for monitoring of Moesin 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Moesin gene expression knockdown using RT-PCR Primer: Moesin (m)-PR: sc-35956-PR (20 μ l, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Rossy, J., et al. 2007. Ezrin/Moesin in motile Walker 256 carcinosarcoma cells: signal-dependent relocalization and role in migration. *Exp. Cell Res.* 313: 1106-1120.
2. Rayaprolu, S., et al. 2020. Flow-cytometric microglial sorting coupled with quantitative proteomics identifies Moesin as a highly-abundant microglial protein with relevance to Alzheimer's disease. *Mol. Neurodegener.* 15: 28.
3. Cohen, J., et al. 2022. Oocyte ERM and EWI proteins are involved in mouse fertilization. *Front. Cell Dev. Biol.* 10: 863729.
4. Zhou, Y.K., et al. 2024. M2 exosomes modified by hydrogen sulfide promoted bone regeneration by moesin mediated endocytosis. *Bioact. Mater.* 31: 192-205.

RESEARCH USE

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