SANTA CRUZ BIOTECHNOLOGY, INC.

Moesin siRNA (h): sc-35955

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 is also designated AKAP78. Moesin and Radixin share more than 70% homology with Ezrin and are co-expressed within various cell types. Despite the high degree of homology, the three proteins exhibit a distinct receptor-specific pattern of phosphorylation.

CHROMOSOMAL LOCATION

Genetic locus: MSN (human) mapping to Xq12.

PRODUCT

Moesin 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 Moesin shRNA Plasmid (h): sc-35955-SH and Moesin shRNA (h) Lentiviral Particles: sc-35955-V as alternate gene silencing products.

For independent verification of Moesin (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-35955A, sc-35955B and sc-35955C.

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

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

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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Moesin gene expression knockdown using RT-PCR Primer: Moesin (h)-PR: sc-35955-PR (20 µl, 430 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Guo, X., et al. 2009. ERM protein Moesin is phosphorylated by advanced glycation end products and modulates endothelial permeability. Am. J. Physiol. Heart Circ. Physiol. 297: H238-H246.
2. Barrero-Villar, M., et al. 2009. Moesin is required for HIV-1-induced CD4-CXCR4 interaction, F-Actin redistribution, membrane fusion and viral infection in lymphocytes. J. Cell Sci. 122: 103-113.
3. Estecha, A., et al. 2009. Moesin orchestrates cortical polarity of melanoma tumour cells to initiate 3D invasion. J. Cell Sci. 122: 3492-3501.
4. Nikolic, D.S., et al. 2011. HIV-1 activates Cdc42 and induces membrane extensions in immature dendritic cells to facilitate cell-to-cell virus propagation. Blood 118: 4841-4852.
5. Titushkin, I., et al. 2011. Altered osteogenic commitment of human mesenchymal stem cells by ERM protein-dependent modulation of cellular biomechanics. J. Biomech. 44: 2692-2698.
6. Lee, W., et al. 2015. Role of Moesin in HMGB1-stimulated severe inflammatory responses. Thromb. Haemost. 114: 350-363.
7. Montt-Guevara, M.M., et al. 2016. Androgens regulate T47D cells motility and invasion through Actin cytoskeleton remodeling. Front. Endocrinol. 7: 136.
8. Zhang, X., et al. 2018. Fasudil increases temozolomide sensitivity and suppresses temozolomide-resistant glioma growth via inhibiting ROCK2/ABCG2. Cell Death Dis. 9: 190.
9. Botros, L., et al. 2020. Bosutinib prevents vascular leakage by reducing focal adhesion turnover and reinforcing junctional integrity. J. Cell Sci. 133: jcs240077.

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.