SANTA CRUZ BIOTECHNOLOGY, INC.

Ezrin siRNA (h): sc-35349

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ezrin, Moesin and Radixin belong to a family of highly homologous Actin-associated proteins that are localized just beneath the plasma membrane. The 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 AKAP78. Moesin and Radixin share over 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: EZR (human) mapping to 6q25.3.

PRODUCT

Ezrin 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 Ezrin shRNA Plasmid (h): sc-35349-SH and Ezrin shRNA (h) Lentiviral Particles: sc-35349-V as alternate gene silencing products.

For independent verification of Ezrin (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-35349A, sc-35349B and sc-35349C.

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

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

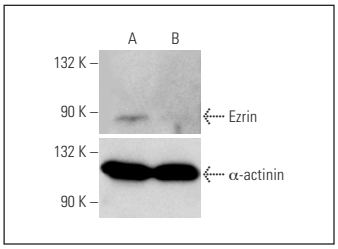
GENE EXPRESSION MONITORING

Ezrin (3C12): sc-58758 is recommended as a control antibody for monitoring of Ezrin 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 Ezrin gene expression knockdown using RT-PCR Primer: Ezrin (h)-PR: sc-35349-PR (20 µl, 565 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



Ezrin siRNA (h): sc-35349. Western blot analysis of Ezrin expression in non-transfected control (**A**) and Ezrin siRNA transfected (**B**) HeLa cells. Blot probed with Ezrin (C-15): sc-6409. α-actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Sharma, N.R., et al. 2010. Reciprocal regulation of Akt and MAP kinase dictates virus-host cell fusion. J. Virol. 84: 4366-4382.
2. Li, Q., et al. 2012. Expression of Ezrin correlates with malignant phenotype of lung cancer, and *in vitro* knockdown of Ezrin reverses the aggressive biological behavior of lung cancer cells. Tumour Biol. 33: 1493-1504.
3. Li, Q., et al. 2015. Ezrin/exocyst complex regulates mucin 5AC secretion induced by neutrophil elastase in human airway epithelial cells. Cell. Physiol. Biochem. 35: 326-338.
4. Suchanski, J., et al. 2017. Podoplanin increases the migration of human fibroblasts and affects the endothelial cell network formation: a possible role for cancer-associated fibroblasts in breast cancer progression. PLoS ONE 12: e0184970.
5. Yao, Q., et al. 2018. microRNA-96 acts as a tumor suppressor gene in human osteosarcoma via target regulation of Ezrin. Life Sci. 203: 1-11.
6. Lathika, L.M., et al. 2019. Role of phospho-Ezrin in differentiating thyroid carcinoma. Sci. Rep. 9: 6190.
7. 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.