SANTA CRUZ BIOTECHNOLOGY, INC.

EHM2 siRNA (h): sc-43358

BACKGROUND

Neurofibromatosis type 2 (NF2) is an autosomal dominant disease characterized by the development of central nervous system tumors. The NF2 gene encodes a protein with homology to the band 4.1 superfamily, which includes Ezrin, Radixin, Moesin and Talin, as well as several protein tyrosine phosphatases. The NF2 protein links the Actin cytoskeleton to cell surface glycoproteins and suppresses cell growth *in vitro* and *in vivo*. In addition, NF2 impairs Actin cytoskeleton-associated processes. A novel gene, Ehm2, is expressed in high metastatic, but not in low metastatic, K-1735 murine melanoma cells. The EHM2 protein, a 527 amino acid polypeptide, is expressed in liver, lung, kidney and testis, as well as in also in 7- to 17-day embryos. EHM2 belongs to the NF2/ERM/4.1 superfamily of proteins, which function in connecting cell surface transmembrane proteins to cytoskeletal molecules.

REFERENCES

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3. Hashimoto, Y., Shindo-Okada, N., Tani, M., Takeuchi, K., Toma, H. and Yokota, J. 1996. Identification of genes differentially expressed in association with metastatic potential of K-1735 murine melanoma by messenger RNA differential display. Cancer Res. 56: 5266-5671.
4. Xu, L., Gonzalez-Agosti, C., Beauchamp, R., Pinney, D., Sterner, C. and Ramesh, V. 1998. Analysis of molecular domains of epitope-tagged merlin isoforms in Cos-7 cells and primary rat Schwann cells. Exp. Cell Res. 238: 231-240.
5. Shimizu, K., Nagamachi, Y., Tani, M., Kimura, K., Shiroishi, T., Wakana, S. and Yokota, J. 2000. Molecular cloning of a novel NF2/ERM/4.1 superfamily gene, EHM2, that is expressed in high-metastatic K1735 murine melanoma cells. Genomics 65: 113-120.
6. Gutmann, D.H., Hirbe, A.C., Huang, Z.Y. and Haipek, C.A. 2001. The protein 4.1 tumor suppressor, DAL-1, impairs cell motility, but regulates proliferation in a cell-type-specific fashion. Neurobiol. Dis. 8: 266-278.

CHROMOSOMAL LOCATION

Genetic locus: EPB41L4B (human) mapping to 9q31.3.

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.

PRODUCT

EHM2 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 EHM2 shRNA Plasmid (h): sc-43358-SH and EHM2 shRNA (h) Lentiviral Particles: sc-43358-V as alternate gene silencing products.

For independent verification of EHM2 (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-43358A, sc-43358B and sc-43358C.

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

EHM2 siRNA (h) is recommended for the inhibition of EHM2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor EHM2 gene expression knockdown using RT-PCR Primer: EHM2 (h)-PR: sc-43358-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.