SANTA CRUZ BIOTECHNOLOGY, INC.

Ermin siRNA (h): sc-105336

BACKGROUND

Ermin, also known as JN (juxtanodin) or ERMN (ermin, ERM-like protein), is a 284 amino acid protein that is highly expressed in brain and moderately expressed in lung and liver. Ermin contains a coiled coil-domain and a F-Actin-binding domain. Ermin plays a role in cytoskeletal rearrangements during the late wrapping and/or compaction phases of myelinogenesis and is considered a novel cytoskeletal molecule that is exclusively expressed by oligodendrocytes. During the late stage of myelination, Ermin localizes to the outer cytoplasmic lip of the myelin sheath and the paranodal loops of oligodendrocytes. Ermin binds Actin and is expressed as two isoforms produced by alternative splicing events. Ermin is encoded by a gene located on human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Zhang, B., et al. 2005. Juxtanodin: an oligodendroglial protein that promotes cellular arborization and 2',3'-cyclic nucleotide-3'-phosphodiesterase trafficking. Proc. Natl. Acad. Sci. USA 102: 11527-11532.
2. Brockschnieder, D., et al. 2006. Ermin, a myelinating oligodendrocyte-specific protein that regulates cell morphology. J. Neurosci. 26: 757-762.
3. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610072. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Li, W., et al. 2007. Sirtuin 2, a mammalian homolog of yeast silent information regulator-2 longevity regulator, is an oligodendroglial protein that decelerates cell differentiation through deacetylating α-Tubulin. J. Neurosci. 27: 2606-2616.
5. Tang, J., et al. 2009. Juxtanodin in the rat olfactory epithelium: specific expression in sustentacular cells and preferential subcellular positioning at the apical junctional belt. Neuroscience 161: 249-258.

CHROMOSOMAL LOCATION

Genetic locus: ERMN (human) mapping to 2q24.1.

PRODUCT

Ermin 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 Ermin shRNA Plasmid (h): sc-105336-SH and Ermin shRNA (h) Lentiviral Particles: sc-105336-V as alternate gene silencing products.

For independent verification of Ermin (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-105336A, sc-105336B and sc-105336C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

Ermin siRNA (h) is recommended for the inhibition of Ermin 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 Ermin gene expression knockdown using RT-PCR Primer: Ermin (h)-PR: sc-105336-PR (20 µl). 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.