SANTA CRUZ BIOTECHNOLOGY, INC.

Ichthyin siRNA (m): sc-146136

BACKGROUND

Ichthyin (ICHN) is a 466 amino acid protein that is highly expressed in brain, lung, stomach, keratinocytes and leukocytes, and is localized to the cellular membrane as a multi-pass membrane protein. Ichthyin is expressed as two isoforms and is thought to possibly be a membrane receptor for the hepoxilin pathway. An ortholog of Ichthyin in *Drosophila melanogaster* is spichthyin (Spict). In the event that Spict is not functional, bone morphogenetic protein (BMP) signaling is upregulated and expansion of the neuromuscular junction occurs. Spict is thought to inhibit BMP signaling and the upregulation of BMP is thought to be associated with autosomal recessive congenital ichthyosis (ARCI). ARCI is a group of skin disorders varying in severity and phenotypes and the association between genotype and phenotype is not well understood in patients with ARCI. Non-bullous congenital ichthyosiform erythroderma (NCIE) is a phenotype of ARCI which is common in the event that the gene encoding Ichthyin is mutated. As a possible ligand receptor for the hepoxilin pathway, Ichthyin's ligand-receptor interactions may be a potential target for treatment of dry skin.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Nipal4 (mouse) mapping to 11 B1.1.

PRODUCT

Ichthyin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ichthyin shRNA Plasmid (m): sc-146136-SH and Ichthyin shRNA (m) Lentiviral Particles: sc-146136-V as alternate gene silencing products.

For independent verification of Ichthyin (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-146136A, sc-146136B and sc-146136C.

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

Ichthyin siRNA (m) is recommended for the inhibition of Ichthyin 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 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 Ichthyin gene expression knockdown using RT-PCR Primer: Ichthyin (m)-PR: sc-146136-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.

PROTOCOLS

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