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Kindlin-1 siRNA (m): sc-146482

BACKGROUND

Kindlin-1, also called Kindlerin or Unc-112-related protein 1 (URP1), is a 677 amino acid member of the kindlin family involved in cell adhesion. Kindlin-1 interacts with the cytoplasmic domain of Integrin β 1 and Integrin β 3. Kindlin-1 is expressed in the cytoplasm, in cell junctions and in focal adhesions of brain, kidney, colon, skeletal muscle, adrenal gland, prostate and placenta. Kindlin-1 is only weakly expressed, if at all, in bone marrow, heart, liver, lung, small intestine, spleen and peripheral blood leukocytes. Upregulation of Kindlin-1 occurs in many colon and lung carcinomas. In focal adhesions, induction via TGF β 1 results in Kindlin-1 localizing to membrane ruffles. Mutations in the gene encoding Kindlin-1 can lead to a condition known as Kindler syndrome. This autosomal recessive disorder is characterized by skin blistering, sun sensitivity, abnormal pigmentation, atrophy and overall skin fragility.

REFERENCES

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3. Ashton, G.H., et al. 2004. Recurrent mutations in kindlin-1, a novel keratinocyte focal contact protein, in the autosomal recessive skin fragility and photosensitivity disorder, Kindler syndrome. *J. Invest. Dermatol.* 122: 78-83.
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7. Has, C., et al. 2006. Molecular basis of Kindler syndrome in Italy: novel and recurrent Alu/Alu recombination, splice site, nonsense, and frameshift mutations in the KIND1 gene. *J. Invest. Dermatol.* 126: 1776-1783.
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9. Ussar, S., et al. 2006. The Kindlins: subcellular localization and expression during murine development. *Exp. Cell Res.* 312: 3142-3151.

CHROMOSOMAL LOCATION

Genetic locus: *Fermt1* (mouse) mapping to 2 F2.

PROTOCOLS

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

PRODUCT

Kindlin-1 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Kindlin-1 shRNA Plasmid (m): sc-146482-SH and Kindlin-1 shRNA (m) Lentiviral Particles: sc-146482-V as alternate gene silencing products.

For independent verification of Kindlin-1 (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-146482A, sc-146482B and sc-146482C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Kindlin-1 siRNA (m) is recommended for the inhibition of Kindlin-1 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 μ M in 66 μ l. 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 Kindlin-1 gene expression knockdown using RT-PCR Primer: Kindlin-1 (m)-PR: sc-146482-PR (20 μ l). 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.