SANTA CRUZ BIOTECHNOLOGY, INC.

Kindlin-3 siRNA (h): sc-96761

BACKGROUND

Kindlin-3, also known as FERMT3 (fermitin family homolog 3), URP2, KIND3, MIG-2, MIG2B or URP2, is a 667 amino acid protein that localizes to both the cell membrane and the cytoplasm and contains one PH domain and one FERM domain. Expressed at high levels in lymph node tissue and at lower levels in spleen, thymus, stomach, placenta, lung, testis and small intestine, Kindlin-3 is thought to be involved in cell adhesion events and may play a role in apoptosis. Kindlin-3 is overexpressed in B-cell malignancies, suggesting that, via its ability to affect cell adhesion, Kindlin-3 may participate in tumor transformation and metastasis. Two isforms of Kindlin-3, designated short and long, exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607901. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Siegel, D.H., et al. 2003. Loss of kindlin-1, a human homolog of the *Caenorhabditis elegans* Actin-extracellular-matrix linker protein UNC-112, causes Kindler syndrome. Am. J. Hum. Genet. 73: 174-187.
3. Weinstein, E.J., et al. 2003. URP1: a member of a novel family of PH and FERM domain-containing membrane-associated proteins is significantly over-expressed in lung and colon carcinomas. Biochim. Biophys. Acta 1637: 207-216.
4. Boyd, R.S., et al. 2003. Proteomic analysis of the cell-surface membrane in chronic lymphocytic leukemia: identification of two novel proteins, BCNP1 and MIG2B. Leukemia 17: 1605-1612.
5. Rikova, K., et al. 2007. Global survey of phosphotyrosine signaling identifies oncogenic kinases in lung cancer. Cell 131: 1190-1203.
6. Wang, L., et al. 2008. URP2SF, a FERM and PH domain containing protein, regulates NFκB and apoptosis. Biochem. Biophys. Res. Commun. 368: 899-906.
7. Moser, M., et al. 2008. Kindlin-3 is essential for integrin activation and platelet aggregation. Nat. Med. 14: 325-330.

CHROMOSOMAL LOCATION

Genetic locus: FERMT3 (human) mapping to 11q13.1.

PRODUCT

Kindlin-3 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 Kindlin-3 shRNA Plasmid (h): sc-96761-SH and Kindlin-3 shRNA (h) Lentiviral Particles: sc-96761-V as alternate gene silencing products.

For independent verification of Kindlin-3 (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-96761A, sc-96761B and sc-96761C.

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

Kindlin-3 siRNA (h) is recommended for the inhibition of Kindlin-3 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 Kindlin-3 gene expression knockdown using RT-PCR Primer: Kindlin-3 (h)-PR: sc-96761-PR (20 µl, 446 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Morikis, V.A., et al. 2020. Tensile force transmitted through LFA-1 bonds mechanoregulate neutrophil inflammatory response. J. Leukoc. Biol. 108: 1815-1828.

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.