

# KPL2 siRNA (m): sc-146562

## BACKGROUND

Flagella and cilia are both membrane-bound projections from the cell surface that beat in distinctive patterns. Cilia are shorter and usually more profuse than flagella and contain a microtubule cytoskeleton, the ciliary axoneme, surrounded by a ciliary membrane. The ciliary membranes of all cilia hold specific receptors and ion channel proteins that initiate signaling pathways that regulate motility and/or link mechanical or chemical stimuli to intracellular transduction cascades regulating differentiation, migration and cell growth during development and in adulthood. KPL2, also known as SPEF2 (sperm flagellar 2), is a 1,822 amino acid protein that contains a calponin homology domain, three nuclear localization signals, a consensus P-loop and a proline-rich region. Required for correct axoneme development, KPL2 is predominantly expressed in cells with cilia or flagella. Four isoforms of KPL2 exists as a result of alternative splicing events.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Spef2 (mouse) mapping to 15 A1.

## PRODUCT

KPL2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KPL2 shRNA Plasmid (m): sc-146562-SH and KPL2 shRNA (m) Lentiviral Particles: sc-146562-V as alternate gene silencing 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

KPL2 siRNA (m) is recommended for the inhibition of KPL2 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  $\mu$ M in 66  $\mu$ 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 KPL2 gene expression knockdown using RT-PCR Primer: KPL2 (m)-PR: sc-146562-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.