

UBL4B siRNA (m): sc-154865

BACKGROUND

Ubiquitin is a 77 amino acid protein that targets proteins for degradation by the 26S Proteasome. Ubiquitin-like proteins are not directly involved in protein degradation, but appear to have many mechanistic similarities with the ubiquitin pathway. UBL4B (ubiquitin-like protein 4B) is a 174 amino acid cytoplasmic protein that contains a ubiquitin-like domain. UBL4B likely arose by retroposition during mammalian evolution from UBL4A, an X-linked intron-bearing housekeeping gene. While UBL4A is highly conserved, UBL4B has undergone rapid evolution and may have evolved new functions. Expression of UBL4B is restricted to post-meiotic germ cells in testis and ovarian tissue, where it likely functions in post-translational protein modification.

REFERENCES

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4. Edelmann, M.J. and Kessler, B.M. 2008. Ubiquitin and ubiquitin-like specific proteases targeted by infectious pathogens: emerging patterns and molecular principles. *Biochim. Biophys. Acta* 1782: 809-816.
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7. Rohozinski, J., Anderson, M.L., Broaddus, R.E., Edwards, C.L. and Bishop, C.E. 2009. Spermatogenesis associated retrogenes are expressed in the human ovary and ovarian cancers. *PLoS ONE* 4: e5064.

CHROMOSOMAL LOCATION

Genetic locus: Ubl4b (mouse) mapping to 3 F2.3.

PRODUCT

UBL4B 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UBL4B shRNA Plasmid (m): sc-154865-SH and UBL4B shRNA (m) Lentiviral Particles: sc-154865-V as alternate gene silencing products.

For independent verification of UBL4B (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-154865A, sc-154865B and sc-154865C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

UBL4B siRNA (m) is recommended for the inhibition of UBL4B 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 UBL4B gene expression knockdown using RT-PCR Primer: UBL4B (m)-PR: sc-154865-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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