SANTA CRUZ BIOTECHNOLOGY, INC.

MOB1B siRNA (h): sc-88864

BACKGROUND

Sterile-20 (Ste20) is a serine/threonine kinase in *Saccharomyces cerevisiae* that is involved in relaying signals from G protein-coupled receptors to cytosolic MAP kinase cascades. The mammalian homologs MST1 and MST2, also designated Krs-2 and Krs-1, respectively, are major regulators of cell proliferation and survival during development. MST1/MST2 phosphorylize MOBKL1A and MOBKL1B in an MST1/MST2-dependent manner in mitosis and in response to okadaic acid or H_2O_2. MOBKL1A and MOBKL1B, also designated MOB1A and MOB1B, bind to and regulate downstream targets such as the NDR-family protein kinases and LATS1 kinase. Therefore, MOBKL1A and MOBKL1B participate in cell cycle checkpoint control and tumor inhibition.

REFERENCES

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2. Schinkmann, K. and Blenis, J. 1997. Cloning and characterization of a human STE20-like protein kinase with unusual cofactor requirements. J. Biol. Chem. 272: 28695-28703.
3. Bichsel, S.J., et al 2004. Mechanism of activation of NDR (nuclear Dbf2-related) protein kinase by the hMOB1 protein. J. Biol. Chem. 279: 35228-35235.
4. Bothos, J., et al. 2005. Human LATS1 is a mitotic exit network kinase. Cancer Res. 65: 6568-6575.
5. Hergovich, A., et al. 2005. Human NDR kinases are rapidly activated by MOB proteins through recruitment to the plasma membrane and phosphorylation. Mol. Cell. Biol. 25: 8259-8272.
6. Hergovich, A., et al. 2006. The human tumour suppressor LATS1 is activated by human MOB1 at the membrane. Biochem. Biophys. Res. Commun. 345: 50-58.
7. Sasaki, H., et al. 2007. Human MOB1 expression in non-small-cell lung cancer. Clin. Lung Cancer 8: 273-276.
8. Praskova, M., et al. 2008. MOBKL1A/MOBKL1B phosphorylation by MST1 and MST2 inhibits cell proliferation. Curr. Biol. 18: 311-321.

CHROMOSOMAL LOCATION

Genetic locus: MOB1B (human) mapping to 4q13.3.

PRODUCT

MOB1B 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 MOB1B shRNA Plasmid (h): sc-88864-SH and MOB1B shRNA (h) Lentiviral Particles: sc-88864-V as alternate gene silencing products.

For independent verification of MOB1B (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-88864A, sc-88864B and sc-88864C.

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

MOB1B siRNA (h) is recommended for the inhibition of MOB1B 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 MOB1B gene expression knockdown using RT-PCR Primer: MOB1B (h)-PR: sc-88864-PR (20 µl, 498 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Han, X., et al. 2020. Programmable synthetic protein circuits for the identification and suppression of hepatocellular carcinoma. Mol. Ther. Oncolytics 17: 70-82.

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.