

MOV10 siRNA (m): sc-149516

BACKGROUND

MOV10 (moloney leukemia virus 10), also known as putative helicase MOV-10, gb110 or fSAP113, is a 1,003 amino acid novel telomerase-associated protein that belongs to the DNA2/NAM7 helicase family and SDE3 subfamily. Localizing to mRNA-degrading cytoplasmic P bodies, MOV10 may function as a RNA helicase that is required to mediate miRNA-guided mRNA cleavage and RNA-mediated gene silencing by the RISC (RNA-induced silencing) complex. Highly expressed in ovary and testis, MOV10 is involved in hepatitis δ virus (HDV) transcription and replication, and is known to interact with eIF2C1, eIF2C2, eIF6, Dicer and TRBP2. MOV10 exists as three alternatively spliced isoforms that are encoded by a gene located on human chromosome 1 and mouse chromosome 3. Following translation, MOV10 may become phosphorylated upon DNA damage by either ATM or ATR.

REFERENCES

1. Baird, D., et al. 2005. The Cool-2/ α -Pix protein mediates a Cdc42-Rac signaling cascade. *Curr. Biol.* 15: 1-10.
2. Chendrimada, T.P., et al. 2007. MicroRNA silencing through RISC recruitment of eIF6. *Nature* 447: 823-828.
3. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610742. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Haussecker, D., et al. 2008. Capped small RNAs and MOV10 in human hepatitis δ virus replication. *Nat. Struct. Mol. Biol.* 15: 714-721.
6. Nakano, M., et al. 2009. MOV10 as a novel telomerase-associated protein. *Biochem. Biophys. Res. Commun.* 388: 328-332.
7. Furtak, V., et al. 2010. Perturbation of the P-body component MOV10 inhibits HIV-1 infectivity. *PLoS ONE* 5: e9081.

CHROMOSOMAL LOCATION

Genetic locus: Mov10 (mouse) mapping to 3 F2.2.

PRODUCT

MOV10 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 MOV10 shRNA Plasmid (m): sc-149516-SH and MOV10 shRNA (m) Lentiviral Particles: sc-149516-V as alternate gene silencing products.

For independent verification of MOV10 (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-149516A, sc-149516B and sc-149516C.

PROTOCOLS

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

MOV10 siRNA (m) is recommended for the inhibition of MOV10 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.

GENE EXPRESSION MONITORING

MOV10 (B-3): sc-515722 is recommended as a control antibody for monitoring of MOV10 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MOV10 gene expression knockdown using RT-PCR Primer: MOV10 (m)-PR: sc-149516-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.