SANTA CRUZ BIOTECHNOLOGY, INC.

MOB2 siRNA (h): sc-96555

BACKGROUND

HCCA2 (hepatocellular carcinoma-associated gene 2), also known as MOB2 (Mps one binder kinase activator-like 2), is a 268 amino acid protein that belongs to the MOB1/phocein family. HCCA2 is expressed in lung, spleen, brain and fetal liver. It is highly expressed in hepatocellular carcinoma. HCCA2 is localized in the perinuclear region of the cytoplasm in liver cancer tissues and co-localizes with MAD2L2 in the nucleus of Hela cells. HCCA2 is characterized by two N-glycosylation sites, six N-myristolylation sites, two Src homolgy 3 (SH3), and several phosphorylation motifs which indicate that this protein may play a role in an intracellular signal transduction cascade. HCCA2 binds to and regulates the autophosphorylation of the related human serine/threonine kinase 38 (NDR1) and serine/threonine kinase 38L (NDR2). It has been shown that HCCA2 plays a critical role in cell cycle regulation. Overexpression of the protein during the G_0/G_1 phase inhibits cell proliferation causing cell cycle arrest.

REFERENCES

1. Wang, Z.X., Wang, H.Y. and Wu, M.C. 2001. Identification and characterization of a novel human hepatocellular carcinoma-associated gene. Br. J. Cancer 85: 1162-1167.
2. Wang, Z., Wang, H. and Chen, Z. 2002. Cloning of liver cancer-related gene HCCA2 and association of that gene with liver cancer. Zhonghua Yi Xue Za Zhi 81: 332-335.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. John Hopkins University, Baltimore, MD. MIM Number: 607860. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Devroe, E., Erdjument-Bromage, H., Tempst, P. and Silver, P.A. 2004. Human Mob proteins regulate the NDR1 and NDR2 serine-threonine kinases. J. Biol. Chem. 279: 24444-24451.

CHROMOSOMAL LOCATION

Genetic locus: MOB2 (human) mapping to 11p15.5.

PRODUCT

MOB2 siRNA (h) is a pool of 2 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 MOB2 shRNA Plasmid (h): sc-96555-SH and MOB2 shRNA (h) Lentiviral Particles: sc-96555-V as alternate gene silencing products.

For independent verification of MOB2 (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-96555A and sc-96555B.

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.

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

MOB2 siRNA (h) is recommended for the inhibition of MOB2 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.

GENE EXPRESSION MONITORING

MOB2 (2400C3a): sc-81564 is recommended as a control antibody for monitoring of MOB2 (h) 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MOB2 gene expression knockdown using RT-PCR Primer: MOB2 (h)-PR: sc-96555-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.