

HUNK siRNA (h): sc-44362

BACKGROUND

The HUNK (hormonally upregulated Neu-associated kinase) protein, also designated MAK-V in mouse, has been identified as a novel SNF1-related serine/threonine kinase. The human HUNK gene localizes to chromosome 21q22.11 and encodes a protein with nucleocytoplasmic distribution and localizes to the centrosome. Overexpression of the HUNK protein associates with approximately 50% of breast carcinomas, and may provide diagnostic-prognostic value as a molecular marker. Serine/threonine-protein kinase SNF1-like kinase 2 (SIK) phosphorylates Ser 794 of IRS1 in Insulin-stimulated adipocytes, which may modulate the efficiency of Insulin signal transduction. SIK is activated by phosphorylation on Thr 175 by STK11 in complex with STE20-related adapter- α and CAB39.

REFERENCES

1. Korobko, I.V., et al. 2000. The MAK-V protein kinase regulates endocytosis in mouse. *Mol. Gen. Genet.* 264: 411-418.
2. Gardner, H.P., et al. 2000. Developmental role of the SNF1-related kinase HUNK in pregnancy-induced changes in the mammary gland. *Development* 127: 4493-4509.
3. Gardner, H.P., et al. 2000. Cloning and characterization of HUNK, a novel mammalian SNF1-related protein kinase. *Genomics* 63: 46-59.
4. Korobko, I.V., et al. 2004. Protein kinase MAK-V/HUNK as a possible diagnostic and prognostic marker of human breast carcinoma. *Arch. Patol.* 66: 6-9.
5. Korobko, E.V., et al. 2004. Subcellular localization of MAK-V/HUNK protein kinase expressed in COS-1 cells. *Cell Biol. Int.* 28: 49-56.
6. Korobko, E.V., et al. 2005. Molecular cloning and characterization of the mouse mak-v/HUNK gene promoter. *Mol. Biol.* 39: 72-79.

CHROMOSOMAL LOCATION

Genetic locus: HUNK (human) mapping to 21q22.11.

PRODUCT

HUNK 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HUNK shRNA Plasmid (h): sc-44362-SH and HUNK shRNA (h) Lentiviral Particles: sc-44362-V as alternate gene silencing products.

For independent verification of HUNK (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-44362A, sc-44362B and sc-44362C.

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 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

HUNK siRNA (h) is recommended for the inhibition of HUNK 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 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

HUNK (B-7): sc-514689 is recommended as a control antibody for monitoring of HUNK 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 HUNK gene expression knockdown using RT-PCR Primer: HUNK (h)-PR: sc-44362-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.