SANTA CRUZ BIOTECHNOLOGY, INC.

Caper siRNA (h): sc-60322

BACKGROUND

Caper, also known as splicing factor HCC1 or hepatocellular carcinoma protein 1 and RNA binding region containing protein 2 (RNPC2), acts as a transcriptional coactivator for steroid nuclear receptors c-Jun, ERα and ER-β. Caper, a nuclear protein with highest concentrations in nuclear speckles, plays a role in the pre-mRNA splicing process. Two isoforms of Caper, HCC1.3 and HCC1.4, co-localize with pre-mRNA splicing factor SC35 and uridine-rich small nuclear RNAs. Caper is a widely expressed protein with highest levels detected in skeletal muscle, lung, brain and pancreas.

REFERENCES

1. Imai, H., Chan, E.K., Kiyosawa, K., Fu, X.D. and Tan, E.M. 1993. Novel nuclear autoantigen with splicing factor motifs identified with antibody from hepatocellular carcinoma. J. Clin. Invest. 92: 2419-2426.
2. Jung, D.J., Na, S.Y., Na, D.S. and Lee, J.W. 2002. Molecular cloning and characterization of CAPER, a novel coactivator of activating protein-1 and estrogen receptors. J. Biol. Chem. 277: 1229-1234.
3. Cazalla, D., Newton, K. and Cáceres, J.F. 2005. A novel SR-related protein is required for the second step of Pre-mRNA splicing. Mol. Cell. Biol. 25: 2969-2980.
4. Dowhan, D.H., Hong, E.P., Auboeuf, D., Dennis, A.P., Wilson, M.M., Berget, S.M. and O'Malley, B.W. 2005. Steroid hormone receptor coactivation and alternative RNA splicing by U2AF65-related proteins CAPERα and CAPERβ. Mol. Cell 17: 429-439.
5. http://harvester.embl.de/harvester/Q144/Q14498.htm

CHROMOSOMAL LOCATION

Genetic locus: RBM39 (human) mapping to 20q11.22.

PRODUCT

Caper 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 Caper shRNA Plasmid (h): sc-60322-SH and Caper shRNA (h) Lentiviral Particles: sc-60322-V as alternate gene silencing products.

For independent verification of Caper (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-60322A, sc-60322B and sc-60322C.

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

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

Caper (G-10): sc-376531 is recommended as a control antibody for monitoring of Caper 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 Caper gene expression knockdown using RT-PCR Primer: Caper (h)-PR: sc-60322-PR (20 µl, 574 bp). 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.

PROTOCOLS

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