SANTA CRUZ BIOTECHNOLOGY, INC.

p8 siRNA (m): sc-40793

BACKGROUND

The human p8 (candidate of metastasis 1) gene maps to chromosome 16p11.2 and encodes a transcription factor that regulates pancreatic growth. p8 upregulates the glucagon gene promoter by recruiting the p300 cofactor to increase Pax2A and Pax2B activity and by binding the Pax2-interacting protein PTIP to suppress its inhibition. p8 is present at high levels in pancreatic acinar cells during the acute phase of pancreatitis in developing pancreas and during pancreatic regeneration. Acinar cells upregulate p8 mRNA in response to cellular pancreatitis-induced injury. *In vitro* studies suggest that p8 mRNA is induced in pancreatic and non-pancreatic cells in response to apoptotic stimuli.

REFERENCES

1. Mallo, G.V., Fiedler, F., Calvo, E.L., Ortiz, E.M., Vasseur, S., Keim, V., Morisset, J. and Iovanna, J.L. 1997. Cloning and expression of the rat p8 cDNA, a new gene activated in pancreas during the acute phase of pancreatitis, pancreatic development, and regeneration, and which promotes cellular growth. J. Biol. Chem. 272: 32360-32369.
2. Ree, A.H., Tvermyr, M., Engebraaten, O., Rooman, M., Røsok, O., Hovig, E., Meza-Zepeda, L.A., Bruland, O.S. and Fodstad, O. 1999. Expression of a novel factor in human breast cancer cells with metastatic potential. Cancer Res. 59: 4675-4680.
3. Vasseur, S., Vidal Mallo, G., Fiedler, F., Bödeker, H., Cánepa, E., Moreno, S. and Iovanna, J.L. 1999. Cloning and expression of the human p8, a nuclear protein with mitogenic activity. Eur. J. Biochem. 259: 670-675.
4. Hoffmeister, A., Ropolo, A., Vasseur, S., Mallo, G.V., Bodeker, H., Ritz-Laser, B., Dressler, G.R., Vaccaro, M.I., Dagorn, J.C., Moreno, S. and Iovanna, J.L. 2002. The HMG-I/Y-related protein p8 binds to p300 and Pax2 *trans*-activation domain-interacting protein to regulate the *trans*-activation activity of the Pax2A and Pax2B transcription factors on the glucagon gene promoter. J. Biol. Chem. 277: 22314-22319.
5. LocusLink Report (LocusID: 26471). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Nupr1 (mouse) mapping to 7 F3.

PRODUCT

p8 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p8 shRNA Plasmid (m): sc-40793-SH and p8 shRNA (m) Lentiviral Particles: sc-40793-V as alternate gene silencing products.

For independent verification of p8 (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-40793A, sc-40793B and sc-40793C.

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

p8 siRNA (m) is recommended for the inhibition of p8 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 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 p8 gene expression knockdown using RT-PCR Primer: p8 (m)-PR: sc-40793-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Huang, J., et al. 2011. Progressive endoplasmic reticulum stress contributes to hepatocarcinogenesis in fatty acyl-CoA oxidase 1-deficient mice. Am. J. Pathol. 179: 703-713.

RESEARCH USE

For research use only, not for use in diagnostic procedures.