SANTA CRUZ BIOTECHNOLOGY, INC.

PNRC2 siRNA (h): sc-78752

BACKGROUND

PNRC2 (proline-rich nuclear receptor coactivator 2), also known as HSPC208, is a 139 amino acid nuclear protein. Expressed in lung, heart, brain, placenta and skeletal muscle, PNRC2 functions as a nuclear receptor coactivator that interacts with and activates a variety of proteins, including ERα, ERRα, ERRγ, GR and PR. The interaction between PNRC2 and its target receptors is dependent upon the presence of an SH3 binding motif, a small protein domain that has a β-barrel fold and is found in substrate-specific proteins that are involved in signaling pathways. In addition to its role as a nuclear coactivator, PNRC2 may be necessary for maintaining fat stores within the body and is thought to play an important part in controlling the balance between energy expenditure and energy storage.

REFERENCES

1. Zhou, D., Quach, K.M., Yang, C., Lee, S.Y., Pohajdak, B. and Chen, S. 2000. PNRC: a proline-rich nuclear receptor coregulatory protein that modulates transcriptional activation of multiple nuclear receptors including orphan receptors SF1 (steroidogenic factor 1) and ERRα1 (estrogen related receptor α-1). Mol. Endocrinol. 14: 986-998.
2. Zhou, D. and Chen, S. 2001. PNRC2 is a 16 kDa coactivator that interacts with nuclear receptors through an SH3-binding motif. Nucleic Acids Res. 29: 3939-3948.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611882. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Hentschke, M. and Borgmeyer, U. 2003. Identification of PNRC2 and TLE1 as activation function-1 cofactors of the orphan nuclear receptor ERRγ. Biochem. Biophys. Res. Commun. 312: 975-982.
5. Zhou, D., Masri, S., Ye, J.J. and Chen, S. 2005. Transcriptional regulation of the mouse PNRC2 promoter by the nuclear factor Y (NFY) and E2F1. Gene 361: 89-100.
6. Zhou, D., Ye, J.J., Li, Y., Lui, K. and Chen, S. 2006. The molecular basis of the interaction between the proline-rich SH3-binding motif of PNRC and estrogen receptor α. Nucleic Acids Res. 34: 5974-5986.

CHROMOSOMAL LOCATION

Genetic locus: PNRC2 (human) mapping to 1p36.11.

PRODUCT

PNRC2 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 PNRC2 shRNA Plasmid (h): sc-78752-SH and PNRC2 shRNA (h) Lentiviral Particles: sc-78752-V as alternate gene silencing products.

For independent verification of PNRC2 (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-78752A, sc-78752B and sc-78752C.

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

PNRC2 siRNA (h) is recommended for the inhibition of PNRC2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PNRC2 gene expression knockdown using RT-PCR Primer: PNRC2 (h)-PR: sc-78752-PR (20 µl, 559 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.