SANTA CRUZ BIOTECHNOLOGY, INC.

PACRG siRNA (m): sc-61278

BACKGROUND

The deduced 257 amino acid protein PACRG (Parkin co-regulated gene) shows potential links to the ubiquitin/proteasome system. PACRG and Parkin are attached in a head-to-head arrangement on opposite DNA strands and share a common 5' flanking promoter region. The PACRG gene maps to chromosome 6q26; Northern blot analysis detects PACRG expression in all tissues examined except placenta. Using a positional cloning strategy in 197 Vietnamese leprosy simplex families (i.e. families with two unaffected parents and one affected child), significant connections between leprosy and 17 markers in the 5' regulatory region that PARK2 and PACRG share were observed. Possession of two or more of the 17 risk alleles is highly predictive of leprosy.

REFERENCES

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2. Lockhart, P.J., et al. 2004. It's a double knock-out! The quaking mouse is a spontaneous deletion of parkin and parkin co-regulated gene (PACRG). Mov. Disord. 19: 101-104.
3. Mira, M.T., et al. 2004. Susceptibility to leprosy is associated with PARK2 and PACRG. Nature 427: 636-640.
4. Alcais, A., et al. 2005. Genetic dissection of immunity in leprosy. Curr. Opin. Immunol. 17: 44-48.
5. Dapper, J.D. and Justice, M.J. 2005. Defining the breakpoints of the quaking (viable) mouse mutation reveals a duplication from a parkin intron. Mov. Disord. 20: 1369-1374.
6. Dawe, H.R., et al. 2005. The Parkin co-regulated gene product, PACRG, is an evolutionarily conserved axonemal protein that functions in outer-doublet microtubule morphogenesis. J. Cell Sci. 118: 5421-5430.
7. Deng, H., et al. 2005. Genetic analysis of Parkin co-regulated gene (PACRG) in patients with early-onset parkinsonism. Neurosci. Lett. 382: 297-299.
8. Malhotra, D., et al. 2006. Association study of major risk single nucleo-tide polymorphisms in the common regulatory region of PARK2 and PACRG genes with leprosy in an Indian population. Eur. J. Hum. Genet. 14: 438-442.

CHROMOSOMAL LOCATION

Genetic locus: Pacrg (mouse) mapping to 17 A1.

PRODUCT

PACRG 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 PACRG shRNA Plasmid (m): sc-61278-SH and PACRG shRNA (m) Lentiviral Particles: sc-61278-V as alternate gene silencing products.

For independent verification of PACRG (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-61278A, sc-61278B and sc-61278C.

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

PACRG siRNA (m) is recommended for the inhibition of PACRG 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 PACRG gene expression knockdown using RT-PCR Primer: PACRG (m)-PR: sc-61278-PR (20 µl). 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.