SANTA CRUZ BIOTECHNOLOGY, INC.

Prickle1 siRNA (h): sc-76247

BACKGROUND

Prickle1, also known as RILP or EPM1B, is an 831 amino acid protein that contains one PET domain and three LIM zinc-binding domains and localizes to the cytoplasm, as well as to the nuclear membrane. Expressed at higher levels in placenta and at lower levels in liver, brain, kidney, lung and pancreas, Prickle1 is thought to function as a nuclear receptor that interacts with NRSF, a silencer protein that binds the DNA sequence element NRSE (neuron-restrictive silencer element). Defects in the gene encoding Prickle1 are associated with autosomal recessive progressive myoclonic epilepsy-1B, which is characterized by quick jerks of the arms, shoulders or legs. The gene encoding Prickle1 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Jenny, A., et al. 2003. Prickle and Strabismus form a functional complex to generate a correct axis during planar cell polarity signaling. EMBO J. 22: 4409-4420.
2. Katoh, M. and Katoh, M. 2003. Identification and characterization of human PRICKLE1 and PRICKLE2 genes as well as mouse Prickle1 and Prickle2 genes homologous to *Drosophila* tissue polarity gene prickle. Int. J. Mol. Med. 11: 249-256.
3. Shimojo, M. and Hersh, L.B. 2003. REST/NRSF-interacting LIM domain protein, a putative nuclear translocation receptor. Mol. Cell. Biol. 23: 9025-9031.
4. Chan, D.W., et al. 2006. Prickle1 negatively regulates Wnt/β-catenin pathway by promoting Dishevelled ubiquitination/degradation in liver cancer. Gastroenterology 131: 1218-1227.
5. Greco, S.J., et al. 2007. Synergy between the RE-1 silencer of transcription and NFκB in the repression of the neurotransmitter gene TAC1 in human mesenchymal stem cells. J. Biol. Chem. 282: 30039-30050.

CHROMOSOMAL LOCATION

Genetic locus: PRICKLE1 (human) mapping to 12q12.

PRODUCT

Prickle1 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 Prickle1 shRNA Plasmid (h): sc-76247-SH and Prickle1 shRNA (h) Lentiviral Particles: sc-76247-V as alternate gene silencing products.

For independent verification of Prickle1 (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-76247A, sc-76247B and sc-76247C.

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

Prickle1 siRNA (h) is recommended for the inhibition of Prickle1 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

Prickle1 (F-5): sc-393034 is recommended as a control antibody for monitoring of Prickle1 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 Prickle1 gene expression knockdown using RT-PCR Primer: Prickle1 (h)-PR: sc-76247-PR (20 µl, 437 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.