SANTA CRUZ BIOTECHNOLOGY, INC.

PRIP siRNA (h): sc-61401

BACKGROUND

Peroxisome proliferator-activated receptor-interacting protein (PRIP), also designated nuclear receptor co-activator 6, is related to Phospholipase C, but is catalytically inactive on its own. It acts as a nuclear receptor co-activator by binding directly to nuclear receptors and stimulating their transcriptional activities in a hormone-dependent manner. PRIP is a ubiquitously expressed protein with highest expression in ovary, brain, testis and prostate. It interacts with PRIP-interacting protein with methyltransferase activity (PIMT). They serve as liaisons between cAMP response element-binding protein-binding protein (CBP) and PPARγ-binding protein-anchored (PBP) co-activator complexes, which are involved in the transcriptional activity of nuclear receptors. PRIP also plays an important role in controlling the action of $GABA_A$ receptor phosphorylation by inhibiting phosphatase PP1, thereby mediating the action of synaptic inhibition that is controlled by these receptors.

REFERENCES

1. Schellenberg, G.D., et al. 1991. APP717, APP693 and PRIP gene mutations are rare in Alzheimer disease. Am. J. Hum. Genet. 49: 511-517.
2. Maundrell, K. 1993. Thiamine-repressible expression vectors PREP and PRIP for fission yeast. Gene 123: 127-130.
3. Zhu, Y., et al. 2000. Isolation and characterization of peroxisome proliferator-activated receptor (PPAR) interacting protein (PRIP) as a co-activator for PPAR. J. Biol. Chem. 275: 13510-13516.
4. Zhu, Y., et al. 2001. Cloning and characterization of PIMT, a protein with a methyltransferase domain, which interacts with and enhances nuclear receptor co-activator PRIP function. Proc. Natl. Acad. Sci. USA 98: 10380-10385.

CHROMOSOMAL LOCATION

Genetic locus: NCOA6 (human) mapping to 20q11.22.

PRODUCT

PRIP 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 PRIP shRNA Plasmid (h): sc-61401-SH and PRIP shRNA (h) Lentiviral Particles: sc-61401-V as alternate gene silencing products.

For independent verification of PRIP (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-61401A, sc-61401B and sc-61401C.

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

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

PRIP (E-12): sc-515547 is recommended as a control antibody for monitoring of PRIP 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 PRIP gene expression knockdown using RT-PCR Primer: PRIP (h)-PR: sc-61401-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. Lee, K.G., et al. 2024. Nuclear receptor coactivator 6 is a critical regulator of NLRP3 inflammasome activation and gouty arthritis. Cell. Mol. Immunol. 21: 227-244.

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.