

PRA1 siRNA (m): sc-152434

BACKGROUND

PRA1 (prenylated Rab acceptor protein 1), alternately known as RABAC1 (Rab acceptor 1) or YIP3, is a 185 amino acid multi-pass membrane protein and Rab regulator required for vesicle formation from the Golgi complex. Existing as a homodimer, PRA1 is ubiquitously expressed and found at high levels in pituitary gland, kidney, placenta, stomach and lung. PRA1 interacts with prenylated Rab proteins, most specifically, Rab 4B, Rab 5A and Rab 5C, along with VAMP-2, Rab GDI α and piccolo. PRA1 weakly interacts with Rab 4A, Rab 6, Rab 7, Rab 17 and Rab 22. PRA1 may regulate the action of Rab GTPases to SNARE complexes, thereby controlling vesicle fusion and docking. The gene encoding PRA1 maps to human chromosome 19q13.2.

REFERENCES

1. Bucci, C., et al. 2001. Expression analysis and chromosomal assignment of PRA1 and RILP genes. *Biochem. Biophys. Res. Commun.* 286: 815-819.
2. Figueroa, C., et al. 2001. Prenylated Rab acceptor protein is a receptor for prenylated small GTPases. *J. Biol. Chem.* 276: 28219-28225.
3. Evans, D.T., et al. 2002. Envelope glycoprotein cytoplasmic domains from diverse lentiviruses interact with the prenylated Rab acceptor. *J. Virol.* 76: 327-337.
4. Jacobs, C. and Pirson, I. 2003. Pitfalls in the use of transfected overexpression systems to study membrane proteins function: the case of TSH receptor and PRA1. *Mol. Cell. Endocrinol.* 209: 71-75.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 604925. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Blancou, P., et al. 2005. PRA1 co-localizes with envelope but does not influence primate lentivirus production, infectivity or envelope incorporation. *J. Gen. Virol.* 86: 1785-1790.
7. Kim, J.T., et al. 2006. Prenylated Rab acceptor 1 (PRA1) inhibits TCF/ β -catenin signaling by binding to β -catenin. *Biochem. Biophys. Res. Commun.* 349: 200-208.
8. Liu, H.P., et al. 2006. PRA1 promotes the intracellular trafficking and NF κ B signaling of EBV latent membrane protein 1. *EMBO J.* 25: 4120-4130.
9. Fo, C.S., et al. 2006. Genomic organization, expression profile, and characterization of the new protein PRA1 domain family, member 2 (PRAF2). *Gene* 371: 154-165.

CHROMOSOMAL LOCATION

Genetic locus: Rabac1 (mouse) mapping to 7 A3.

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.

PRODUCT

PRA1 siRNA (m) is a pool of 2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PRA1 shRNA Plasmid (m): sc-152434-SH and PRA1 shRNA (m) Lentiviral Particles: sc-152434-V as alternate gene silencing products.

For independent verification of PRA1 (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-152434A and sc-152434B.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PRA1 siRNA (m) is recommended for the inhibition of PRA1 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 μ M in 66 μ l. 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 PRA1 gene expression knockdown using RT-PCR Primer: PRA1 (m)-PR: sc-152434-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.