SANTA CRUZ BIOTECHNOLOGY, INC.

PCIA1 siRNA (h): sc-97705

BACKGROUND

PCIA1 (placenta cross-immune reaction antigen 1), also known as DDA1 (DET1 and DDB1 associated 1), is a 102 amino acid protein that belongs to the DDA1 family. PCIA1 may be involved in ubiquitination and subsequent proteasomal degradation of target proteins. PCIA1 is a component of the DDD-E2 complexes which may provide a platform for interaction with CUL4A and WD repeat proteins. In addition to the PCIA1 protein, the DDD core complex contains DET1, DDA1 and DDB1. The DDD core complex recruits a specific UBE2E enzyme, such as UBE2E1, UBE2E2 or UBE2E3, to form specific DDD-E2 complexes. The PCIA1 gene is conserved in canine, bovine, mouse, rat, chicken, zebrafish and mosquito, and maps to human chromosome 19p13.11. Consisting of around 63 million bases with over 1,400 genes, chromosome 19 makes up over 2% of human genomic DNA. It is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family, and Fcα receptors.

REFERENCES

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2. Jin, J., et al. 2006. A family of diverse Cul4-Ddb1-interacting proteins includes Cdt2, which is required for S phase destruction of the replication factor Cdt1. Mol. Cell 23: 709-721.
3. Angers, S., et al. 2006. Molecular architecture and assembly of the DDB1-CUL4A ubiquitin ligase machinery. Nature 443: 590-593.
4. Pick, E., et al. 2007. Mammalian DET1 regulates Cul4A activity and forms stable complexes with E2 ubiquitin-conjugating enzymes. Mol. Cell. Biol. 27: 4708-4719.
5. Li, Z.M., et al. 2007. Searching for genes interacting with human PCIA1 gene by using the bacterial two-hybrid system. Zhonghua Yi Xue Yi Chuan Xue Za Zhi 24: 279-283.
6. Olma, M.H., et al. 2009. An interaction network of the mammalian COP9 signalosome identifies Dda1 as a core subunit of multiple Cul4-based E3 ligases. J. Cell Sci. 122: 1035-1044.

CHROMOSOMAL LOCATION

Genetic locus: DDA1 (human) mapping to 19p13.11.

PRODUCT

PCIA1 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 PCIA1 shRNA Plasmid (h): sc-97705-SH and PCIA1 shRNA (h) Lentiviral Particles: sc-97705-V as alternate gene silencing products.

For independent verification of PCIA1 (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-97705A, sc-97705B and sc-97705C.

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

PCIA1 siRNA (h) is recommended for the inhibition of PCIA1 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 PCIA1 gene expression knockdown using RT-PCR Primer: PCIA1 (h)-PR: sc-97705-PR (20 µl, 508 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.