



ANKRD33 siRNA (h): sc-96204

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases, such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD33 (ankyrin repeat domain 33), also known as PANKY (photoreceptor ankyrin repeat protein), is a 272 amino acid protein that contains three ANK repeats and exists as two alternatively spliced isoforms. Encoded by a gene that maps to human chromosome 12q13.13, ANKRD33 inhibits DNA-binding of CRX, thereby playing a role in terminal differentiation of photoreceptor cells. Conserved in chimpanzee, cow and mouse, ANKRD33 is strongly expressed in retina, as well as pineal gland and both developing and mature photoreceptors. Deletion of ANKRD33 and five neighboring genes is linked to hereditary haemorrhagic telangiectasia.

REFERENCES

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3. Shoukier, M., et al. 2008. Characterization of five novel large deletions causing hereditary haemorrhagic telangiectasia. *Clin. Genet.* 73: 320-330.
4. Sitras, V., et al. 2009. Placental gene expression profile in intrauterine growth restriction due to placental insufficiency. *Reprod Sci.* 16: 701-711.
5. Fujino, Y., et al. 2009. Identification of a novel common proviral integration site, flit-1, in feline leukemia virus induced thymic lymphoma. *Virology* 386: 16-22.
6. Hu, J., et al. 2010. Computational analysis of tissue-specific gene networks: application to murine retinal functional studies. *Bioinformatics* 26: 2289-2297.
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CHROMOSOMAL LOCATION

Genetic locus: ANKRD33 (human) mapping to 12q13.13.

PRODUCT

ANKRD33 siRNA (h) 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 ANKRD33 shRNA Plasmid (h): sc-96204-SH and ANKRD33 shRNA (h) Lentiviral Particles: sc-96204-V as alternate gene silencing products.

For independent verification of ANKRD33 (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-96204A and sc-96204B.

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

ANKRD33 siRNA (h) is recommended for the inhibition of ANKRD33 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 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 ANKRD33 gene expression knockdown using RT-PCR Primer: ANKRD33 (h)-PR: sc-96204-PR (20 μ l). 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.