

CAMSAP1L1 siRNA (m): sc-141997

BACKGROUND

CAMSAP1L1 (Calmodulin-regulated spectrin-associated protein 1-like protein 1), also known as Calmodulin-regulated spectrin-associated protein 2, is a 1,489 amino acid protein that contains one calponin-homology domain and one CKK domain, which serves to bind microtubules. There are three isoforms of CAMSAP1L1 that are produced as a result of alternative splicing events. The gene encoding CAMSAP1L1 maps to human chromosome 1, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

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- Lans, H., et al. 2006. Cell biology: ageing nucleus gets out of shape. *Nature* 440: 32-34.
- Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
- Scaffidi, P., et al. 2006. Lamin A-dependent nuclear defects in human aging. *Science* 312: 1059-1063.
- Baines, A.J., et al. 2009. The CKK domain (DUF1781) binds microtubules and defines the CAMSAP/ssp4 family of animal proteins. *Mol. Biol. Evol.* 26: 2005-2014.

CHROMOSOMAL LOCATION

Genetic locus: Camsap1l1 (mouse) mapping to 1 E4.

PRODUCT

CAMSAP1L1 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CAMSAP1L1 shRNA Plasmid (m): sc-141997-SH and CAMSAP1L1 shRNA (m) Lentiviral Particles: sc-141997-V as alternate gene silencing products.

For independent verification of CAMSAP1L1 (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-141997A, sc-141997B and sc-141997C.

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 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

CAMSAP1L1 siRNA (m) is recommended for the inhibition of CAMSAP1L1 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 CAMSAP1L1 gene expression knockdown using RT-PCR Primer: CAMSAP1L1 (m)-PR: sc-141997-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.