SANTA CRUZ BIOTECHNOLOGY, INC.

cylindromatosis 1 siRNA (m): sc-37327

BACKGROUND

Familial cylindromatosis is an autosomal dominant genetic predisposition to multiple benign neoplasms of the skin known as cylindromas. These cylindromas may become infected, resulting in disfigurement and discomfort. In severe cases, ulcerated cylindromas are only treatable by reconstructive surgery with skin grafts. The human CYLD gene on chromosome 16q12.1 encodes the protein cylindromatosis 1. Mutations in this gene are responsible for familial cylindromatosis. The cylindromatosis 1 protein contains three cytoskeletal-associated protein-glycineconserved (CAP-GLY) domains and may function to coordinate the attachment of organelles to microtubules. Cylindromatosis 1 is expressed in brain, gonads, skeletal muscle, spleen, liver, heart, lung and leukocytes. Somatic mutations of the CYLD gene appear to play a role in the oncogenesis of tumors with cylindromatous features.

REFERENCES

1. Biggs, P.J., et al. 1995. Familial cylindromatosis (turban tumour syndrome) gene localized to chromosome 16q12-q13: evidence for its role as a tumour suppressor gene. Nat. Genet. 11: 441-443.
2. Biggs, P.J., et al. 1996. The cylindromatosis gene (cyld1) on chromosome 16q may be the only tumour suppressor gene involved in the development of cylindromas. Oncogene 12: 1375-1377.
3. Verhoef, S., et al. 1998. Familial cylindromatosis mimicking tuberous sclerosis complex and confirmation of the cylindromatosis locus, CYLD1, in a large family. J. Med. Genet. 35: 841-845.
4. Thomson, S.A., et al. 1999. A new hereditary cylindromatosis family associated with CYLD1 on chromosome 16. Hum. Genet. 105: 171-173.
5. Bignell, G.R., et al. 2000. Identification of the familial cylindromatosis tumour-suppressor gene. Nat. Genet. 25: 160-165.
6. Leonard, N., et al. 2001. Loss of heterozygosity at cylindromatosis gene locus, CYLD, in sporadic skin adnexal tumours. J. Clin. Pathol. 54: 689-692.
7. Strobel, P., et al. 2002. Spiradenocylindroma of the kidney: clinical and genetic findings suggesting a role of somatic mutation of the CYLD1 gene in the oncogenesis of an unusual renal neoplasm. Am. J. Surg. Pathol. 26: 119-124.

CHROMOSOMAL LOCATION

Genetic locus: CYLD (mouse) mapping to 8 C3.

PRODUCT

cylindromatosis 1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see cylindromatosis 1 shRNA Plasmid (m): sc-37327-SH and cylindromatosis 1 shRNA (m) Lentiviral Particles: sc-37327-V as alternate gene silencing products.

For independent verification of cylindromatosis 1 (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-37327A, sc-37327B and sc-37327C.

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

cylindromatosis 1 siRNA (m) is recommended for the inhibition of cylindromatosis 1 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 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

cylindromatosis 1 (H-6): sc-137139 is recommended as a control antibody for monitoring of cylindromatosis 1 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 cylindromatosis 1 gene expression knockdown using RT-PCR Primer: cylindromatosis 1 (m)-PR: sc-37327-PR (20 µl). 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.