SANTA CRUZ BIOTECHNOLOGY, INC.

Med28 siRNA (m): sc-106213

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The Power to Question

BACKGROUND

In mammalian cells, transcription is regulated in part by high molecular weight coactivating complexes that mediate signals between transcriptional activators and RNA polymerase II (Pol II). The Mediator complex is one such multiprotein structure that functions as a bridge between regulatory proteins and Pol II, thereby regulating Pol II-dependent transcription. Med28 (mediator complex subunit 28), also known as EG1 (endothelial-derived protein 1), magicin (merlin and GRB2-interacting cytoskeletal protein) or tumor angiogenesis marker EG-1, is a 178 amino acid subunit of the Mediator complex that localizes to both nucleus and cytoplasm. Widely expressed with highest expression in vascular tissues such as placenta, testis and liver, Med28 participates in the regulation of Pol II-mediated gene expression and is thought to play a key role in signal regulation and cell proliferation. It is suggested that Med28 functions as a repressor of SMC (smooth muscle cell) differentiation and may be associated with abnormalities in SMC growth and differentiation, including atherosclerosis, asthma, hypertension and smooth muscle tumors.

REFERENCES

1. Näär, A.M., et al. 1999. Composite co-activator ARC mediates chromatin-directed transcriptional activation. Nature 398: 828-832.
2. Liu, C., et al. 2002. Identification of a novel endothelial-derived gene EG-1. Biochem. Biophys. Res. Commun. 290: 602-612.
3. Kato, Y., et al. 2002. A component of the ARC/Mediator complex required for TGFβ/Nodal signalling. Nature 418: 641-646.
4. Sato, S., et al. 2004. A set of consensus mammalian mediator subunits identified by multidimensional protein identification technology. Mol. Cell 14: 685-691.
5. Wiederhold, T., et al. 2004. Magicin, a novel cytoskeletal protein associates with the NF2 tumor suppressor merlin and GRB2. Oncogene 23: 8815-8825.

CHROMOSOMAL LOCATION

Genetic locus: Med28 (mouse) mapping to 5 B3.

PRODUCT

Med28 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 Med28 shRNA Plasmid (m): sc-106213-SH and Med28 shRNA (m) Lentiviral Particles: sc-106213-V as alternate gene silencing products.

For independent verification of Med28 (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-106213A, sc-106213B and sc-106213C.

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 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

Med28 siRNA (m) is recommended for the inhibition of Med28 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Med28 gene expression knockdown using RT-PCR Primer: Med28 (m)-PR: sc-106213-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.