SANTA CRUZ BIOTECHNOLOGY, INC.

SEI-1 siRNA (m): sc-62989

BACKGROUND

SEI-1, also known as SERTAD1 (SERTA domain containing 1) or TRIP-Br1 (transcriptional regulator interacting with the PHD-bromodomain 1), is a transcriptional regulator that integrates signals provided by transcription factors. Acting at E2F-responsive promoters, SEI-1 interacts with the PHD- and bromodomains of proteins such as TIF1 and DP-1, thereby transmitting their signals to the promoter and stimulating transcriptional activity. SEI-1 exists as a multiprotein complex with E2F-1 and DP-1 and is expressed at different levels throughout the cell cycle, allowing it to regulate cell cycle progression via promoter control during the G_1 and S phases. Additionally, SEI-1 can render the activity of the cyclin D-Cdk4 complex, an important catalyst of the cell cycle, resistant to the inhibitory effects of p16. Overexpression of SEI-1 is implicated in the development of squamous cell carcinomas of the head and neck.

REFERENCES

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2. Tang, T.C., et al. 2002. Identification of a candidate oncogene SEI-1 within a minimal amplified region at 19q13.1 in ovarian cancer cell lines. Cancer Res. 62: 7157-7161.
3. Sim, K.G., et al. 2004. TRIP-Br links E2F to novel functions in the regulation of cyclin E expression during cell cycle progression and in the maintenance of genomic stability. Cell Cycle 3: 1296-1304.
4. Tang, D.J., et al. 2005. Oncogenic transformation by SEI-1 is associated with chromosomal instability. Cancer Res. 65: 6504-6508.
5. Watanabe-Fukunaga, R., et al. 2005. SEI family of nuclear factors regulates p53-dependent transcriptional activation. Genes Cells 10: 851-860.
6. Bott, S.R., et al. 2005. $p21^{WAF1/CIP1}$ gene is inactivated in metastatic prostatic cancer cell lines by promoter methylation. Prostate Cancer Prostatic Dis. 8: 321-326.
7. Li, J., et al. 2005. Dissection of Cdk4-binding and transactivation activities of $p34^{SEI-1}$ and comparison between functions of $p34^{SEI-1}$ and $p16^{INK4A}$. Biochemistry 44: 13246-13256.
8. Sim, K.G., et al. 2006. The TRIP-Br family of transcriptional regulators is essential for the execution of cyclin E-mediated cell cycle progression. Cell Cycle 5: 1111-1115.
9. Lai, I.L., et al. 2007. Transcriptional and subcellular regulation of the TRIP-Br family. Gene 388: 102-109.

CHROMOSOMAL LOCATION

Genetic locus: Sertad1 (mouse) mapping to 7 A3.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

SEI-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 SEI-1 shRNA Plasmid (m): sc-62989-SH and SEI-1 shRNA (m) Lentiviral Particles: sc-62989-V as alternate gene silencing products.

For independent verification of SEI-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-62989A, sc-62989B and sc-62989C.

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

SEI-1 siRNA (m) is recommended for the inhibition of SEI-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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SEI-1 gene expression knockdown using RT-PCR Primer: SEI-1 (m)-PR: sc-62989-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.