

Ciao 1 siRNA (m): sc-40397

BACKGROUND

The Wilms' tumor suppressor protein, WT1, contains a zinc finger domain and is capable of both activating or repressing transcription, depending on cell type and promoter context. A number of proteins, including various tumor suppressors, have been shown to interact with WT1. Interaction of WT1 with p53 results in increased p53 stability, and inhibits the ability of p53 to induce apoptosis. Par-4, a transcriptional repressor, is also known to bind WT1. Ciao 1, a member of the WD40 family of proteins, specifically interacts with WT1, resulting in a decrease in WT1 mediated transcriptional activation. Ciao 1 does not inhibit binding by causing a conformational change or by interfering with the activation domain of WT1.

REFERENCES

1. Maheswaran, S., Englert, C., Bennett, P., Heinrich, G. and Haber, D.A. 1995. The WT1 gene product stabilizes p53 and inhibits p53-mediated apoptosis. *Genes Dev.* 9: 2143-2156.
2. Johnstone, R.W., See, R.H., Sells, S.F., Wang, J., Muthukumar, S., Englert, C., Haber, D.A., Licht, J.D., Sugrue, S.P., Roberts, T., Rangnekar, V.M. and Shi, Y. 1996. A novel repressor, par-4, modulates transcription and growth suppression functions of the Wilms' tumor suppressor WT1. *Mol. Cell. Biol.* 16: 6945-6956.
3. Menke, A.L., van der Eb, A.J. and Jochemsen, A.G. 1998. The Wilms' tumor 1 gene: oncogene or tumor suppressor gene. *Int. Rev. Cytol.* 181: 151-212.
4. Johnstone, R.W., Wang, J., Tommerup, N., Vissing, H., Roberts, T. and Shi, Y. 1998. Ciao 1 is a novel WD40 protein that interacts with the tumor suppressor protein WT1. *J. Biol. Chem.* 273: 10880-10887.

CHROMOSOMAL LOCATION

Genetic locus: Wdr39 (mouse) mapping to 2 F1.

PRODUCT

Ciao 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ciao 1 shRNA Plasmid (m): sc-40397-SH and Ciao 1 shRNA (m) Lentiviral Particles: sc-40397-V as alternate gene silencing products.

For independent verification of Ciao 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-40397A, sc-40397B and sc-40397C.

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

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

GENE EXPRESSION MONITORING

Ciao 1 (E-10): sc-374498 is recommended as a control antibody for monitoring of Ciao 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 Ciao 1 gene expression knockdown using RT-PCR Primer: Ciao 1 (m)-PR: sc-40397-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.