SANTA CRUZ BIOTECHNOLOGY, INC.

# C-MIP siRNA (h): sc-93354

## BACKGROUND

C-MIP (c-Maf-inducing protein), also known as TC-MIP (truncated c-Maf-inducing protein) is a 739 amino acid cytoplasmic and nuclear protein that impedes dissociation of NFκB/IκB-α complexes while inhibiting the degradation of IκB-α. Identified as a Pleckstrin homology (PH) and leucine-rich repeat (LRR)-domain-containing protein, C-MIP exists as three alternatively spliced isoforms with different expression: isoform 1 is found in kidney and peripheral blood mononuclear cells whereas isoform 2 is expressed in lymphocyte precursors. C-MIP isoform 2, also designated TC-MIP, interacts with Filamin 1 in the Th2 (T-helper 2) signaling pathway and may be one of the first proximal signaling proteins to link c-Maf Th2 specific factor activation to T cell receptor-mediated signals. Suggested to influence phonological short-term memory, C-MIP is encoded by a gene located on human chromosome 16.

## REFERENCES


1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XIX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 347-355.
2. Grimbert, P., et al. 2003. Truncation of C-MIP (TC-MIP), a new proximal signaling protein, induces c-Maf Th2 transcription factor and cytoskeleton reorganization. J. Exp. Med. 198: 797-807.
3. Grimbert, P., et al. 2004. The Filamin-A is a partner of TC-MIP, a new adapter protein involved in c-Maf-dependent Th2 signaling pathway. Mol. Immunol. 40: 1257-1261.
4. Newbury, D.F., et al. 2009. C-MIP and ATP2C2 modulate phonological short-term memory in language impairment. Am. J. Hum. Genet. 85: 264-272.
5. Kamal, M., et al. 2009. C-MIP interacts physically with RelA and inhibits nuclear factor κ B activity. Mol. Immunol. 46: 991-998.
6. Kamal, M., et al. 2010. C-MIP interacts with the p85 subunit of PI3 kinase and exerts a dual effect on ERK signaling via the recruitment of Dip1 and DAP kinase. FEBS Lett. 584: 500-506.


## CHROMOSOMAL LOCATION

Genetic locus: CMIP (human) mapping to 16q23.2.

## PRODUCT

C-MIP siRNA (h) 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 C-MIP shRNA Plasmid (h): sc-93354-SH and C-MIP shRNA (h) Lentiviral Particles: sc-93354-V as alternate gene silencing products.

For independent verification of C-MIP (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-93354A, sc-93354B and sc-93354C.

## 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

C-MIP siRNA (h) is recommended for the inhibition of C-MIP expression in human 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 C-MIP gene expression knockdown using RT-PCR Primer: C-MIP (h)-PR: sc-93354-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.