

# Caprin2 siRNA (m): sc-142004

## BACKGROUND

Caprin2 (cytoplasmic activation/proliferation-associated protein 2), also known as EEG1, EEG-1, C1QDC1 (C1q domain-containing protein 1) or gastric cancer multidrug resistance-associated protein, is 1,127 amino acid highly conserved protein that is ubiquitously expressed with highest levels of expression in brain and spleen. Caprin2 stabilizes cytosolic  $\beta$ -catenin and enhances LEF-1 dependent reporter gene activity as well as the expression of Wnt target genes in mammalian cells. Caprin2 promotes LRP5/6 phosphorylation by GSK-3 and enhances the interaction between Axin and LRP5/6. It is suggested that Caprin2 functions as a proapoptotic inhibitor of the cell cycle. Nine isoforms of Caprin2 exist due to alternative splicing events.

## REFERENCES

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2. Grill, B., et al. 2004. Activation/division of lymphocytes results in increased levels of cytoplasmic activation/proliferation-associated protein-1: prototype of a new family of proteins. *J. Immunol.* 172: 2389-2400.
3. Wang, B., et al. 2005. Absence of caprin-1 results in defects in cellular proliferation. *J. Immunol.* 175: 4274-4282.
4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610375. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Ding, Y., et al. 2008. Caprin-2 enhances canonical Wnt signaling through regulating LRP5/6 phosphorylation. *J. Cell Biol.* 182: 865-872.
6. Kaddar, T., et al. 2009. Two new miR-16 targets: Caprin-1 and HMGA1, proteins implicated in cell proliferation. *Biol. Cell* 101: 511-524.
7. Lorén, C.E., et al. 2009. FGF signals induce Caprin2 expression in the vertebrate lens. *Differentiation* 77: 386-394.

## CHROMOSOMAL LOCATION

Genetic locus: Caprin2 (mouse) mapping to 6 G3.

## PRODUCT

Caprin2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Caprin2 shRNA Plasmid (m): sc-142004-SH and Caprin2 shRNA (m) Lentiviral Particles: sc-142004-V as alternate gene silencing products.

For independent verification of Caprin2 (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-142004A, sc-142004B and sc-142004C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Caprin2 siRNA (m) is recommended for the inhibition of Caprin2 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  $\mu$ M in 66  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Caprin2 gene expression knockdown using RT-PCR Primer: Caprin2 (m)-PR: sc-142004-PR (20  $\mu$ 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.