SANTA CRUZ BIOTECHNOLOGY, INC.

# INF2 siRNA (h): sc-92159

## BACKGROUND

INF2 (inverted formin, FH2 and WH2 domain containing), also known as FSGS5 or pp9484, is a 1,249 amino acid cytoplasmic protein that is widely expressed and belongs to the formin homology family. Containing one FH2 (formin homology 2) domain, one GBD/FH3 (Rho GTPase-binding/formin homology 3) domain and a WH2 domain, INF2 is considered a diaphanous formin due to the presence of a diaphanous inhibitory domain located at its N-terminal region. INF2 may play a role in polymerization and depolymerization of Actin filaments. INF2 interacts with Actin at the FH2 domain and is regulated by autoinhibition due to intramolecular GBD-DAD binding. INF2 exists as three alternatively spliced isoforms and is encoded by a gene located on human chromosome 14q32.33 and mouse chromosome 12 F1. Mutations in the gene encoding INF2 may be the cause of autosomal dominant FSGS (focal segmental glomerulosclerosis), a glomerular disease characterized by proteinuria and progression to end-stage renal disease.

## REFERENCES


1. Bindschadler, M., et al. 2004. Formin' new ideas about Actin filament generation. Proc. Natl. Acad. Sci. USA 101: 14685-14686.
2. Chhabra, E.S., et al. 2006. INF2 is a WASP homology 2 motif-containing formin that severs Actin filaments and accelerates both polymerization and depolymerization. J. Biol. Chem. 281: 26754-26767.
3. Chhabra, E.S., et al. 2009. INF2 is an endoplasmic reticulum-associated formin protein. J. Cell Sci. 122: 1430-1440.
4. Brown, E.J., et al. 2010. Mutations in the formin gene INF2 cause focal segmental glomerulosclerosis. Nat. Genet. 42: 72-76.
5. Pei, Y. 2011. INF2 is another piece of the jigsaw puzzle for FSGS. J. Am. Soc. Nephrol. 22: 197-199.
6. Boyer, O., et al. 2011. Mutations in INF2 are a major cause of autosomal dominant focal segmental glomerulosclerosis. J. Am. Soc. Nephrol. 22: 239-245.
7. Sun, H., et al. 2011. Rho activation of mDia formins is modulated by an interaction with inverted formin 2 (INF2). Proc. Natl. Acad. Sci. USA 108: 2933-2938.


## CHROMOSOMAL LOCATION

Genetic locus: INF2 (human) mapping to 14q32.33.

## PRODUCT

INF2 siRNA (h) is a target-specific 19-25 nt siRNA 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 INF2 shRNA Plasmid (h): sc-92159-SH and INF2 shRNA (h) Lentiviral Particles: sc-92159-V as alternate gene silencing products.

## 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

INF2 siRNA (h) is recommended for the inhibition of INF2 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 INF2 gene expression knockdown using RT-PCR Primer: INF2 (h)-PR: sc-92159-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Moore, A.S., et al. 2021. Actin cables and comet tails organize mitochondrial networks in mitosis. Nature 591: 659-664.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.