



# Conductin siRNA (h): sc-35087

## BACKGROUND

$\beta$ -catenin is a component of both the cadherin cell adhesion system and the Wnt signaling pathway. Wnt signaling increases the amount of  $\beta$ -catenin, by preventing its ubiquitination and degradation, allowing its direct interaction with transcription factors of the lymphoid enhancer factor-T cell factor family and modulation of gene expression. Axin is involved in the degradation of  $\beta$ -catenin by acting as a scaffold to form a complex between  $\beta$ -catenin, adenomatous polyposis coli (APC), and GSK-3 $\beta$ . APC, which is phosphorylated by GSK-3 $\beta$ , induces degradation of  $\beta$ -catenin, thus inhibiting Wnt signal transduction. Conductin is 45% identical to Axin and appears to play a similar role to Axin in the Wnt signaling pathway.

## REFERENCES

1. Hulsken, J., et al. 1994. E-cadherin and APC compete for the interaction with  $\beta$ -catenin and the cytoskeleton. *J. Cell Biol.* 127: 2061-2069.
2. Behrens, J., et al. 1996. Functional interaction of  $\beta$ -catenin with the transcription factor LEF-1. *Nature* 382: 638-642.
3. Aberle, H., et al. 1997.  $\beta$ -catenin is a target for the ubiquitin-proteasome pathway. *EMBO J.* 16: 3797-3804.
4. Zeng, L., et al. 1997. The mouse fused locus encodes Axin, an inhibitor of the Wnt signaling pathway that regulates embryonic axis formation. *Cell* 90: 181-192.
5. Behrens, J., et al. 1998. Functional interaction of an Axin homolog, conductin, with  $\beta$ -catenin, APC, and GSK3 $\beta$ . *Science* 280: 596-599.

## CHROMOSOMAL LOCATION

Genetic locus: AXIN2 (human) mapping to 17q24.1.

## PRODUCT

Conductin siRNA (h) is a pool of 4 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 Conductin shRNA Plasmid (h): sc-35087-SH and Conductin shRNA (h) Lentiviral Particles: sc-35087-V as alternate gene silencing products.

For independent verification of Conductin (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-35087A, sc-35087B, sc-35087C and sc-35087D.

## 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

Conductin shRNA (h) Lentiviral Particles is recommended for the inhibition of Conductin 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  $\mu$ 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.

## GENE EXPRESSION MONITORING

Conductin (C-6): sc-25302 is recommended as a control antibody for monitoring of Conductin 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 Conductin gene expression knockdown using RT-PCR Primer: Conductin (h)-PR: sc-35087-PR (20  $\mu$ l, 454 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Yi, Y., et al. 2021. Niclosamide and pyvinium are both potential therapeutics for osteosarcoma, inhibiting Wnt-Axin2-Snail cascade. *Cancers* 13: 4630.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.