

# ARD1B siRNA (m): sc-141185

## BACKGROUND

ARD1B (ARD1 homolog B), also known as NAA11 (N- $\alpha$ -acetyltransferase 11, NatA catalytic subunit), N-terminal acetyltransferase complex ARD1 subunit homolog B or ARD2, is a 229 amino acid protein that contains one N-acetyltransferase domain and belongs to the acetyltransferase family and the ARD1 subfamily. Encoded by a gene that maps to human chromosome 4q21.21, ARD1B exists in several cell lines, with highest levels in MCF-7 cells. ARD1B is conserved in canine, bovine, mouse, rat, *Schizosaccharomyces pombe*, *Saccharomyces cerevisiae*, *Kluyveromyces lactis*, *Eremothecium gossypii*, *Magnaporthe grisea* and *Neurospora crassa*, and localizes to cytoplasm and nucleus. ARD1B pairs with NARG1 to form a complex, which exhibits  $\alpha$  (N-terminal) acetyltransferase activity. ARD1B also independently interacts with HIF-1 $\alpha$  and exhibits potential as a novel prognostic predictor in hepatocellular carcinoma patients.

## REFERENCES

- Arnesen, T., Betts, M.J., Pendino, F., Liberles, D.A., Anderson, D., Caro, J., Kong, X., Varhaug, J.E. and Lillehaug, J.R. 2006. Characterization of hARD2, a processed hARD1 gene duplicate, encoding a human protein N- $\alpha$ -acetyltransferase. *BMC Biochem.* 7: 13.
- Potrzebowski, L., Vinckenbosch, N., Marques, A.C., Chalmel, F., Jegou, B. and Kaessmann, H. 2008. Chromosomal gene movements reflect the recent origin and biology of therian sex chromosomes. *PLoS Biol.* 6: e80.
- Starheim, K.K., Gromyko, D., Velde, R., Varhaug, J.E. and Arnesen, T. 2009. Composition and biological significance of the human N $\alpha$ -terminal acetyltransferases. *BMC Proc.* 3: S3.
- Pang, A.L., Peacock, S., Johnson, W., Bear, D.H., Rennert, O.M. and Chan, W.Y. 2009. Cloning, characterization, and expression analysis of the novel acetyltransferase retrogene ARD1B in the mouse. *Biol. Reprod.* 81: 302-309.
- Fablet, M., Bueno, M., Potrzebowski, L. and Kaessmann, H. 2009. Evolutionary origin and functions of retrogene introns. *Mol. Biol. Evol.* 26: 2147-2156.
- Wang, Y., Mijares, M., Gall, M.D., Turan, T., Javier, A., Bornemann, D.J., Manage, K. and Warrior, R. 2010. *Drosophila* variable nurse cells encodes arrest defective 1 (ARD1), the catalytic subunit of the major N-terminal acetyltransferase complex. *Dev. Dyn.* 239: 2813-2827.
- Huang, G.L., Li, B.K., Zhang, M.Y., Zhang, H.Z., Wei, R.R., Yuan, Y.F., Shi, M., Chen, X.Q., Huang, L., Li, A.H., Huang, B.J., Li, H.H. and Wang, H.Y. 2010. LOH analysis of genes around D4S2964 identifies ARD1B as a prognostic predictor of hepatocellular carcinoma. *World J. Gastroenterol.* 16: 2046-2054.

## CHROMOSOMAL LOCATION

Genetic locus: Naa11 (mouse) mapping to 5 E3.

## PROTOCOLS

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

## PRODUCT

ARD1B 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 ARD1B shRNA Plasmid (m): sc-141185-SH and ARD1B shRNA (m) Lentiviral Particles: sc-141185-V as alternate gene silencing products.

For independent verification of ARD1B (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-141185A, sc-141185B and sc-141185C.

## 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

ARD1B siRNA (m) is recommended for the inhibition of ARD1B 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 ARD1B gene expression knockdown using RT-PCR Primer: ARD1B (m)-PR: sc-141185-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.