



# INO80D siRNA (h): sc-94738

## BACKGROUND

The INO80 complex contributes to a wide variety of chromatin-dependent nuclear transactions, including transcription, DNA repair and DNA replication. Evolutionarily conserved from yeast to human, the INO80 complex belongs to a subfamily of the ATP-dependent chromatin remodelers and is characterized by a split ATPase domain in the core ATPase subunit. ATP-dependent chromatin remodeling complexes contain ATPases of the Swi/Snf superfamily and alter DNA accessibility of chromatin in an ATP-dependent manner. INO80D (INO80 complex subunit D), is an 878 amino acid protein that is a component of the chromatin-remodeling INO80 complex.

## REFERENCES

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2. Jin, J., et al. 2005. A mammalian chromatin remodeling complex with similarities to the yeast INO80 complex. *J. Biol. Chem.* 280: 41207-41212.
3. Bao, Y. and Shen, X. 2007. INO80 subfamily of chromatin remodeling complexes. *Mutat. Res.* 618: 18-29.
4. Ford, J., et al. 2008. Activator-dependent recruitment of SWI/SNF and INO80 during INO1 activation. *Biochem. Biophys. Res. Commun.* 373: 602-606.
5. Papamichos-Chronakis, M. and Peterson, C.L. 2008. The INO80 chromatin-remodeling enzyme regulates replisome function and stability. *Nat. Struct. Mol. Biol.* 15: 338-345.
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7. Klopff, E., et al. 2009. Cooperation between the INO80 complex and histone chaperones determines adaptation of stress gene transcription in the yeast *S. cerevisiae*. *Mol. Cell. Biol.* 29: 4994-5007.
8. Morrison, A.J. and Shen, X. 2009. Chromatin remodelling beyond transcription: the INO80 and SWR1 complexes. *Nat. Rev. Mol. Cell Biol.* 10: 373-384.

## CHROMOSOMAL LOCATION

Genetic locus: INO80D (human) mapping to 2q33.3.

## PRODUCT

INO80D 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see INO80D shRNA Plasmid (h): sc-94738-SH and INO80D shRNA (h) Lentiviral Particles: sc-94738-V as alternate gene silencing products.

For independent verification of INO80D (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-94738A, sc-94738B and sc-94738C.

## 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

INO80D siRNA (h) is recommended for the inhibition of INO80D 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor INO80D gene expression knockdown using RT-PCR Primer: INO80D (h)-PR: sc-94738-PR (20  $\mu$ l, 425 bp). 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.

## PROTOCOLS

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