SANTA CRUZ BIOTECHNOLOGY, INC.

INO80E siRNA (h): sc-93465

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, theINO80 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. INO80E (INO80 complex subunit E), also known as CCDC95, is a 244 amino acid protein that is a component of the chromatin-remodeling INO80 complex.

REFERENCES

1. Kobor, M.S., Venkatasubrahmanyam, S., Meneghini, M.D., Gin, J.W., Jennings, J.L., Link, A.J., Madhani, H.D. and Rine, J. 2004. A protein complex containing the conserved Swi2/Snf2-related ATPase Swr1p deposits histone variant H2A.Z into euchromatin. PLoS Biol. 2: 131.
2. Jin, J., Cai, Y., Yao, T., Gottschalk, A.J., Florens, L., Swanson, S.K., Gutierrez, J.L., Coleman, M.K., Workman, J.L., Mushegian, A., Washburn, M.P., Conaway, R.C. and Conaway, J.W. 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., Odeyale, O. and Shen, C.H. 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.
6. Tsukuda, T., Lo, Y.C., Krishna, S., Sterk, R., Osley, M.A. and Nickoloff, J.A. 2009. INO80-dependent chromatin remodeling regulates early and late stages of mitotic homologous recombination. DNA Repair 8: 360-369.

CHROMOSOMAL LOCATION

Genetic locus: INO80E (human) mapping to 16p11.2.

PRODUCT

INO80E 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see INO80E shRNA Plasmid (h): sc-93465-SH and INO80E shRNA (h) Lentiviral Particles: sc-93465-V as alternate gene silencing products.

For independent verification of INO80E (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-93465A, sc-93465B and sc-93465C.

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

INO80E siRNA (h) is recommended for the inhibition of INO80E 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.

GENE EXPRESSION MONITORING

INO80E (B-6): sc-515298 is recommended as a control antibody for monitoring of INO80E 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 INO80E gene expression knockdown using RT-PCR Primer: INO80E (h)-PR: sc-93465-PR (20 µl, 562 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 for detailed protocols and support products.