SANTA CRUZ BIOTECHNOLOGY, INC.

ASXL1 siRNA (h): sc-72572

BACKGROUND

ASXL1 (additional sex combs-like protein 1) is a 1,541 amino acid protein encoded by the human gene ASXL1. ASXL1 belongs to the Asx family and contains one PHD-type zinc finger. It also contains one Leu-Xaa-Xaa-Leu-Leu (LXXLL) motif, which may be required for an association with nuclear receptors. ASXL1 is believed to be a Polycomb group (PcG) protein. PcG proteins act by forming multiprotein complexes, which are required to maintain the transcriptionally repressive state of homeotic genes throughout development. PcG proteins are not required to initiate repression, but to maintain it during later stages of development. They probably act via methylation of histones, rendering chromatin heritably changed in its expressibility. ASXL1 is a widely expressed nuclear protein with highest expression found in testis.

REFERENCES

1. Fisher, C.L., Berger, J., Randazzo, F. and Brock, H.W. 2003. A human homolog of additional sex combs, additional sex combs-like 1, maps to chromosome 20q11. Gene 306: 115-126.
2. Katoh, M. and Katoh, M. 2003. Identification and characterization of ASXL2 gene in silico. Int. J. Oncol. 23: 845-850.
3. Katoh, M. and Katoh, M. 2004. Identification and characterization of ASXL3 gene in silico. Int. J. Oncol. 24: 1617-1622.
4. Katoh, M. and Katoh, M. 2004. Identification and characterization of human CXXC10 gene in silico. Int. J. Oncol. 25: 1193-1199.
5. Fisher, C.L., Randazzo, F., Humphries, R.K. and Brock, H.W. 2006. Characterization of ASXL1, a murine homolog of additional sex combs, and analysis of the ASX-like gene family. Gene 369: 109-118.
6. Cho, Y.S., Kim, E.J., Park, U.H., Sin, H.S. and Um, S.J. 2006. Additional sex comb-like 1 (ASXL1), in cooperation with SRC-1, acts as a ligand-dependent coactivator for retinoic acid receptor. J. Biol. Chem. 281: 17588-17598.

CHROMOSOMAL LOCATION

Genetic locus: ASXL1 (human) mapping to 20q11.21.

PRODUCT

ASXL1 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 ASXL1 shRNA Plasmid (h): sc-72572-SH and ASXL1 shRNA (h) Lentiviral Particles: sc-72572-V as alternate gene silencing products.

For independent verification of ASXL1 (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-72572A, sc-72572B and sc-72572C.

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

ASXL1 siRNA (h) is recommended for the inhibition of ASXL1 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

ASXL1 (6E2): sc-293204 is recommended as a control antibody for monitoring of ASXL1 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 ASXL1 gene expression knockdown using RT-PCR Primer: ASXL1 (h)-PR: sc-72572-PR (20 µl). 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.