CUL-4A siRNA (h): sc-44355

**BACKGROUND**

CUL-4A is a member of the cullin family of proteins that is involved in the ubiquitin-mediated degradation of cell cycle regulators. CUL-4A regulates cell cycle progression during differentiation, and overexpression of this protein significantly increases the number of cells in S phase and reduces the number that accumulate in G0/G1 phase. CUL-4A localizes to the cytoplasm where it stimulates ubiquitination and degradation of the HoxA9 homeodomain protein, a key regulator of hematopoiesis and embryonic development. CUL-4A also stimulates the degradation of the damaged DNA-binding protein (DDB) that plays a role in DNA repair and is involved in the repair deficiency disease xeroderma pigmentosum. The CUL-4A gene is amplified and overexpressed in breast cancer, implicating the protein in tumorigenesis and/or tumor progression.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: CUL4A (human) mapping to 13q34.

**PRODUCT**

CUL-4A 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 CUL-4A shRNA Plasmid (h): sc-44355-SH and CUL-4A shRNA (h) Lentiviral Particles: sc-44355-V as alternative gene silencing products.

For independent verification of CUL-4A (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-44355A, sc-44355B and sc-44355C.

**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**

CUL-4A siRNA (h) is recommended for the inhibition of CUL-4A 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-36888 (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**

CUL-4 (H-11): sc-377188 is recommended as a control antibody for monitoring of CUL-4A 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:


**RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor CUL-4A gene expression knockdown using RT-PCR Primer: CUL-4A (h)-PR: sc-44355-PR (20 µl, 586 bp). Anneling temperature for the primers should be 55-60°C and the extension temperature should be 68-72°C.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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