SANTA CRUZ BIOTECHNOLOGY, INC.

FAM64A siRNA (h): sc-93656

BACKGROUND

FAM64A, also known as CATS (CALM-interactor expressed in thymus and spleen) or RCS1 (regulator of chromosome segregation protein 1), is a 248 amino acid cell division protein that may control the metaphase to anaphase transition during mitosis. FAM64A localizes to the cytoplasm, nucleolus and nucleus and is expressed in thymus, spleen, colon, ovary and small intestine. Up-regulation of FAM64A begins at S phase and increases up to G_2 and G_2/M phases. A sudden drop in expression happens as cells exit mitosis, with lowest levels in quiescent cells or at the G_1 phase. Isoform 1 and 2 interact with CALM (clathrin assembly lymphoid myeloid leukemia protein), which target CALM to the nucleus. FAM64A interacts with MTA2 (metastasis-associated protein MTA2) and HDAC2 (histone deacetylase 2) subunits of the chromatin-remodeling complex (NuRD) during mitosis and has the strongest association in prometaphase. The gene encoding FAM64A maps to human chromosome 17p13.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FAM64A (human) mapping to 17p13.2.

PRODUCT

FAM64A siRNA (h) is a pool of 2 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 FAM64A shRNA Plasmid (h): sc-93656-SH and FAM64A shRNA (h) Lentiviral Particles: sc-93656-V as alternate gene silencing products.

For independent verification of FAM64A (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-93656A and sc-93656B.

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

FAM64A siRNA (h) is recommended for the inhibition of FAM64A 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FAM64A gene expression knockdown using RT-PCR Primer: FAM64A (h)-PR: sc-93656-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Barbutti, I., Xavier-Ferrucio, J.M., Machado-Neto, J.A., Ricon. L., Traina, F., Bohlander, S.K., Saad, S.T. and Archangelo, L.F. 2016. CATS (FAM64A) abnormal expression reduces clonogenicity of hematopoietic cells. Oncotarget 7: 68385-68396.

RESEARCH USE

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