SANTA CRUZ BIOTECHNOLOGY, INC.

FAM111A siRNA (h): sc-96700

BACKGROUND

FAM111A, also known as KCS2 or GCLEB, is a 611 amino acid protein containing one PIP-box motif. Mutations in FAM111A are linked to Kenny-Caffey syndrome type 2, a rare dysmorphologic syndrome characterized by proportionate short stature, cortical thickening and medullary stenosis of tubular bones, delayed closure of anterior fontanelle, eye abnormalities, and hypoparathyroidism. FAM111A mutations are also linked to gracile bone displasia (GCLEB), also known as osteocraniostenosis, a perinatally lethal condition characterized by narrowing of the medullary cavity of the skull and long bones, gracile bones with thin diaphyses, premature closure of basal cranial sutures and microphthalmia. These disorders suggest FAM111A is a key molecule for normal bone development, height gain and parathyroid hormone function. FAM111A colocalizes with PCNA in the nucleus at replication sites, and promotes S-phase entry and DNA synthesis. FAM111A also interacts with SV40 large T antigen and functions as a host range restriction factor.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FAM111A (human) mapping to 11q12.1.

PRODUCT

FAM111A 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 FAM111A shRNA Plasmid (h): sc-96700-SH and FAM111A shRNA (h) Lentiviral Particles: sc-96700-V as alternate gene silencing products.

For independent verification of FAM111A (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-96700A, sc-96700B and sc-96700C.

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

FAM111A siRNA (h) is recommended for the inhibition of FAM111A 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 FAM111A gene expression knockdown using RT-PCR Primer: FAM111A (h)-PR: sc-96700-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.