SANTA CRUZ BIOTECHNOLOGY, INC.

NFAM1 siRNA (h): sc-75910

BACKGROUND

NFAM1 (NFAT activating protein with ITAM motif 1), also known as CNAIP, is a 270 amino acid single-pass type I membrane protein that contains one ITAM domain and one immunoglobulin-like domain and is subject to glycosylation on its N-terminus. Highly expressed in mast cells, lymphocytes and primary monocytes and expressed at lower levels in non-immune tissue, NFAM1 interacts with Zap-70 and Syk and is thought to function as a receptor, activating both cytokine gene promotors and the NFAT signaling pathway. Additionally, NFAM1 may play an important role in the regulation of B-cell development, thereby mediating immune system function. The gene encoding NFAM1 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NFAM1 (human) mapping to 22q13.2.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

NFAM1 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 NFAM1 shRNA Plasmid (h): sc-75910-SH and NFAM1 shRNA (h) Lentiviral Particles: sc-75910-V as alternate gene silencing products.

For independent verification of NFAM1 (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-75910A and sc-75910B.

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

NFAM1 siRNA (h) is recommended for the inhibition of NFAM1 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 NFAM1 gene expression knockdown using RT-PCR Primer: NFAM1 (h)-PR: sc-75910-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. Zhu, J., Chen, Z., Peng, X., Zheng, Z., Le, A., Guo, J., Ma, L., Shi, H., Yao, K., Zhang, S., Ge, J., Zheng, Z. and Wang, Q. 2022. Extracellular vesicle-derived circITGB1 regulates dendritic cell maturation and cardiac inflammation via miR-342-3p/NFAM1. Oxid. Med. Cell. Longev. 2022: 8392313.

RESEARCH USE

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