SANTA CRUZ BIOTECHNOLOGY, INC.

FAIM siRNA (h): sc-78445

BACKGROUND

FAIM (Fas apoptotic inhibitory molecule), also known as FAIM1, is a 179 amino acid protein that exists as multiple alternatively spliced isoforms and is thought to function as an effector molecule, possibly mediating Ig-induced Fas resistance on B cells. Additionally, FAIM may play a role in protecting neuronal cells from the cytotoxic effects of death ligands. The gene encoding FAIM maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

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2. Rothstein, T.L., Zhong, X., Schram, B.R., Negm, R.S., Donohoe, T.J., Cabral, D.S., Foote, L.C. and Schneider, T.J. 2000. Receptor-specific regulation of B-cell susceptibility to Fas-mediated apoptosis and a novel Fas apoptosis inhibitory molecule. Immunol. Rev. 176: 116-133.
3. Zhong, X., Schneider, T.J., Cabral, D.S., Donohoe, T.J. and Rothstein, T.L. 2001. An alternatively spliced long form of Fas apoptosis inhibitory molecule (FAIM) with tissue-specific expression in the brain. Mol. Immunol. 38: 65-72.
4. Sole, C., Dolcet, X., Segura, M.F., Gutierrez, H., Diaz-Meco, M.T., Gozzelino, R., Sanchis, D., Bayascas, J.R., Gallego, C., Moscat, J., Davies, A.M. and Comella, J.X. 2004. The death receptor antagonist FAIM promotes neurite outgrowth by a mechanism that depends on ERK and NFκB signaling. J. Cell Biol. 167: 479-492.

CHROMOSOMAL LOCATION

Genetic locus: FAIM (human) mapping to 3q22.3.

PRODUCT

FAIM 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 FAIM shRNA Plasmid (h): sc-78445-SH and FAIM shRNA (h) Lentiviral Particles: sc-78445-V as alternate gene silencing products.

For independent verification of FAIM (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-78445A, sc-78445B and sc-78445C.

RESEARCH USE

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

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

FAIM siRNA (h) is recommended for the inhibition of FAIM 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 FAIM gene expression knockdown using RT-PCR Primer: FAIM (h)-PR: sc-78445-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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