SANTA CRUZ BIOTECHNOLOGY, INC.

ALG-4 siRNA (h): sc-90832

BACKGROUND

An increased intracellular Ca^{2+} concentration induces apoptotic cell death. Transiently elevated Ca^{2+} concentrations are required for glucocorticoid-mediated and T cell receptor-mediated pathways, leading to T cell apoptosis. ALG-4 (apoptosis-linked gene 4), alternately known as programmed cell death 11 (PDCD11) or NFκB-binding protein (NFBP), is a 1,871 amino acid protein involved in the biosynthesis of rRNA. ALG-4 co-localizes with U3 RNA in the nucleolus and is expressed at moderate levels in testis. ALG-4 is expressed at low levels in lung, liver, placenta, kidney, spleen, skeletal muscle, ovary, peripheral blood leukocytes, colon, small intestine and thymus. ALG-4 contains multiple phosphorylated serirne residues, four HAT repeats and 12 S_1 motif domains.

REFERENCES

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2. Lacana, E. and D'Adamio, L. 1999. Regulation of Fas ligand expression and cell death by apoptosis-linked gene 4. Nat. Med. 5: 542-547.
3. Sweet, T., Khalili, K., Sawaya, B.E. and Amini, S. 2003. Identification of a novel protein from glial cells based on its ability to interact with NFκB subunits. J. Cell. Biochem. 90: 884-891.
4. Sweet, T., Sawaya, B.E., Khalili, K. and Amini, S. 2005. Interplay between NFBP and NFκB modulates tat activation of the LTR. J. Cell. Physiol. 204: 375-380.
5. Sweet, T., Yen, W., Khalili, K. and Amini, S. 2008. Evidence for involvement of NFBP in processing of ribosomal RNA. J. Cell. Physiol. 214: 381-388.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612333. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PDCD11 (human) mapping to 10q24.33.

PRODUCT

ALG-4 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 ALG-4 shRNA Plasmid (h): sc-90832-SH and ALG-4 shRNA (h) Lentiviral Particles: sc-90832-V as alternate gene silencing products.

For independent verification of ALG-4 (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-90832A, sc-90832B and sc-90832C.

PROTOCOLS

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

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

ALG-4 siRNA (h) is recommended for the inhibition of ALG-4 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 ALG-4 gene expression knockdown using RT-PCR Primer: ALG-4 (h)-PR: sc-90832-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.