SANTA CRUZ BIOTECHNOLOGY, INC.

Anamorsin siRNA (m): sc-60169

BACKGROUND

The name of the protein Anamorsin, also designated cytokine-induced apoptosis inhibitor 1 (CIAPIN1), comes from the Latin term "ana-mors-in", meaning "anti-death molecule". During hematopoiesis, Anamorsin is crucial for mediating the anti-apoptotic effects of various cytokines. It is a ubiquitously expressed protein, and when it is overexpressed, it confers apoptotic resistance. Anamorsin is primarily expressed in the cytoplasm of liver, pancreas and heart tissue cells and does not show any homology to known apoptosis regulatory molecules of the Bcl-2 or CASP families, or to signal transduction molecules. Anamorsin expression in mouse cells confers resistance to apoptosis caused by IL-3 (interleukin-3) deprivation. Studies demonstrate that the addition of growth factors, such as EPO (erythropoietin), SCF (stem cell factor), TPO (thrombopoietin) or IL-3, all of which depend on RAS signaling, induce dose-dependent expression of Anamorsin in mouse cells.

REFERENCES

1. Loftus, B.J., et al. 1999. Genome duplications and other features in 12 Mb of DNA sequence from chromosome 16p and 16q. Genomics 60: 295-308.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608943. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Shibayama, H., et al. 2004. Identification of a cytokine-induced antiapoptotic molecule Anamorsin essential for definitive hematopoiesis. J. Exp. Med. 199: 581-592.
4. Hao, Z., et al. 2005. Preparation and characterization of a specific monoclonal antibody against CIAPIN1. Hybridoma 24: 141-145.
5. Kanakura, Y. 2005. Regulation and dysregulation of hematopoiesis by a cytokine-induced antiapoptotic molecule Anamorsin. Hematology 1: 73-75.
6. Hao, Z., et al. 2006. Distribution of CIAPIN1 in normal fetal and adult human tissues. J. Histochem. Cytochem. 54: 417-426.

CHROMOSOMAL LOCATION

Genetic locus: Ciapin1 (mouse) mapping to 8 C5.

PRODUCT

Anamorsin siRNA (m) 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 Anamorsin shRNA Plasmid (m): sc-60169-SH and Anamorsin shRNA (m) Lentiviral Particles: sc-60169-V as alternate gene silencing products.

For independent verification of Anamorsin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60169A, sc-60169B and sc-60169C.

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

Anamorsin siRNA (m) is recommended for the inhibition of Anamorsin expression in mouse 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 Anamorsin gene expression knockdown using RT-PCR Primer: Anamorsin (m)-PR: sc-60169-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.