SANTA CRUZ BIOTECHNOLOGY, INC.

Akirin2 siRNA (h): sc-95471

BACKGROUND

Akirin2, also known as C6orf166, is a 203 amino acid nuclear protein belonging to the Akirin family. Widely expressed, with highest levels in peripheral blood leukocytes, Akririn2 is a downstream effector of the TNF, IL-1 and TLR signaling pathways which lead to the production of IL-6. Akirin2 also interacts with 14-3-3 to form a complex which represses the transcription of MKP-1. The gene that encodes Akirin2 maps to human chromosome 6. Chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus.

REFERENCES

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2. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
3. Vasan, R.S., et al. 2007. Genome-wide association of echocardiographic dimensions, brachial artery endothelial function and treadmill exercise responses in the Framingham Heart Study. BMC Med. Genet. 8: S2.
4. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. Genes Chromosomes Cancer 47: 159-164.
5. Komiya, Y., et al. 2008. A novel binding factor of 14-3-3β functions as a transcriptional repressor and promotes anchorage-independent growth, tumorigenicity, and metastasis. J. Biol. Chem. 283: 18753-18764.
6. Goto, A., et al. 2008. Akirins are highly conserved nuclear proteins required for NFκB-dependent gene expression in drosophila and mice. Nat. Immunol. 9: 97-104.

CHROMOSOMAL LOCATION

Genetic locus: AKIRIN2 (human) mapping to 6q15.

PRODUCT

Akirin2 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 Akirin2 shRNA Plasmid (h): sc-95471-SH and Akirin2 shRNA (h) Lentiviral Particles: sc-95471-V as alternate gene silencing products.

For independent verification of Akirin2 (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-95471A, sc-95471B and sc-95471C.

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

Akirin2 siRNA (h) is recommended for the inhibition of Akirin2 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 Akirin2 gene expression knockdown using RT-PCR Primer: Akirin2 (h)-PR: sc-95471-PR (20 µl, 586 bp). 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.