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DGK- η siRNA (m): sc-143024

BACKGROUND

Diacylglycerol kinases (DGKs) phosphorylate diacylglycerol (DAG) to produce phosphatidic acid. DAG and phosphatidic acid are lipids that act as second messengers in signaling cascades. DGK- η influences cell activation and secretion of lethal exosomes, which in turn control cell death. DGK- η is abundant in restricted brain regions such as the caudate putamen and olfactory tubercle. DGK- η encodes full-length and truncated transcripts that are present in a range of human tissues, with greatest expression observed in retina. DGK- η is most abundant in skeletal muscle. DGK- η shows specificity for arachidonyl-containing diacylglycerol and is expressed predominantly in testis. DGK- η is most abundant in brain and muscle. DGK- η is closely related to DGK- η and contains one PH domain, two phorbol-ester/DAG-type zinc fingers and one SAM (sterile alpha motif) domain. DGK- η is most abundant in the cerebellum and hippocampus. DGK- η is present in brain and retina as a predominant transcript of more than 12 kb, including a long 3-prime untranslated region, with additional low abundance transcripts of 9.5 and 7.5 kb.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Dgkh (mouse) mapping to 14 D3.

PRODUCT

DGK- η siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DGK- η shRNA Plasmid (m): sc-143024-SH and DGK- η shRNA (m) Lentiviral Particles: sc-143024-V as alternate gene silencing 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

DGK- η siRNA (m) is recommended for the inhibition of DGK- η 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 μ M in 66 μ l. 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 DGK- η gene expression knockdown using RT-PCR Primer: DGK- η (m)-PR: sc-143024-PR (20 μ l). 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.

PROTOCOLS

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