DAK siRNA – Bifunctional ATP-Dependent Dihydroxyacetone Kinase/FAD-AMP Lyase (Cyclizing) (Rat)

PRODUCT OVERVIEW

Product Name	DAK, siRNA
Full Product Name	DAK siRNA (Rat)
Product Gene Name	DAK sirna
Product Synonym Names	Bifunctional ATP-dependent dihydroxyacetone kinase/FAD-AMP lyase; cyclizing
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	DAK siRNA (Rat) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	59,444 Da
3D Structure	ModBase 3D Structure for Q4KLZ6
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of rat DAK gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for DAK sirna	RNA Interference (RNAi)
Related Product Information for DAK sirna	MBS8226167 is an siRNA targeting DAK. Also known as DAK siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit DAK expression using RNA interference
Other Notes	Small volumes of DAK sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DAK. It may not necessarily be applicable to this product.

NCBI GI #	84781664

NCBI GeneID	361730
NCBI Accession #	NP_001034120.1
UniProt Primary Accession #	Q4KLZ6
UniProt Related Accession #	Q4KLZ6
GenBank Nucleotide #	NM_001039031.1
NCBI Official Full Name	bifunctional ATP-dependent dihydroxyacetone kinase/FAD-AMP lyase (cyclizing)
NCBI Official Synonym Full Names	triokinase/FMN cyclase
NCBI Official Symbol	Tkfc
NCBI Official Synonym Symbols	Dak; RGD1311026
UniProt Protein Name	Bifunctional ATP-dependent dihydroxyacetone kinase/FAD-AMP lyase (cyclizing)
UniProt Synonym Protein Names	ATP-dependent dihydroxyacetone kinase (EC:2.7.1.28, EC:2.7.1.29); DHA kinaseAlternative name(s):Glycerone kinase; Triokinase; Triose kinase
Protein Family	Dihydroxyacetone kinase
UniProt Gene Name	Dak
UniProt Synonym Gene Names	DHA kinase
UniProt Entry Name	DHAK_RAT
NCBI Protein Information	bifunctional ATP-dependent dihydroxyacetone kinase/FAD-AMP lyase (cyclizing)
UniProt Comments for DAK	DAK: Catalyzes both the phosphorylation of dihydroxyacetone and of glyceraldehyde, and the splitting of ribonucleoside diphosphate-X compounds among which FAD is the best substrate. Belongs to the dihydroxyacetone kinase (DAK) family. Protein type: Lipid Metabolism - glycerolipid; Kinase, other; EC 4.6.1.15; EC 2.7.1.29; EC 2.7.1.28 Cellular Component: nucleus Molecular Function: metal ion binding; FAD-AMP lyase (cyclizing) activity; triokinase activity; ATP binding; glycerone kinase activity Biological Process: glycerol metabolic process; carbohydrate phosphorylation; cellular carbohydrate metabolic process; regulation of innate immune response
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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