AKAP6 siRNA – A-Kinase Anchor Protein 6 (Human)

PRODUCT OVERVIEW

Product Name	AKAP6, siRNA
Full Product Name	AKAP6 siRNA (Human)
Product Gene Name	AKAP6 sirna
Product Synonym Names	AKAP100; KIAA0311; A-kinase anchor protein 6; AKAP-6; A-kinase anchor protein 100 kDa; AKAP 100; Protein kinase A-anchoring protein 6; PRKA6; mAKAP
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	AKAP6 siRNA (Human) 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	120,243 Da
OMIM	604691
3D Structure	ModBase 3D Structure for Q13023
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 human AKAP6 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 AKAP6 sirna	RNA Interference (RNAi)
Related Product Information for AKAP6 sirna	MBS8203577 is an siRNA targeting AKAP6. Also known as AKAP6 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit AKAP6 expression using RNA interference
Other Notes	Small volumes of AKAP6 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 AKAP6. It may not necessarily be applicable to this product.

NCBI GI #	21493045
NCBI GeneID	9472
NCBI Accession #	NP_004265.3
UniProt Primary Accession #	Q13023
UniProt Secondary Accession #	O15028; A7E242; A7E2D4
UniProt Related Accession #	Q13023
GenBank Nucleotide #	NM_004274.4
NCBI Official Full Name	A-kinase anchor protein 6
NCBI Official Synonym Full Names	A kinase (PRKA) anchor protein 6
NCBI Official Symbol	AKAP6
NCBI Official Synonym Symbols	ADAP6; PRKA6; mAKAP; ADAP100; AKAP100
UniProt Protein Name	A-kinase anchor protein 6
UniProt Synonym Protein Names	A-kinase anchor protein 100 kDa; AKAP 100; Protein kinase A-anchoring protein 6; PRKA6; mAKAP
Protein Family	A-kinase anchor protein
UniProt Gene Name	AKAP6
UniProt Synonym Gene Names	AKAP100; KIAA0311; AKAP-6; AKAP 100; PRKA6
UniProt Entry Name	AKAP6_HUMAN
NCBI Protein Information	A-kinase anchor protein 6
NCBI Summary for AKAP6	The A-kinase anchor proteins (AKAPs) are a group of structurally diverse proteins, which have the common function of binding to the regulatory subunit of protein kinase A (PKA) and confining the holoenzyme to discrete locations within the cell. This gene encodes a member of the AKAP family. The encoded protein is highly expressed in various brain regions and cardiac and skeletal muscle. It is specifically localized to the sarcoplasmic reticulum and nuclear membrane, and is involved in anchoring PKA to the nuclear membrane or sarcoplasmic reticulum. [provided by RefSeq, Jul 2008]
UniProt Comments for AKAP6	AKAP6: Binds to type II regulatory subunits of protein kinase A and anchors/targets them to the nuclear membrane or sarcoplasmic reticulum. May act as an adapter for assembling multiprotein complexes. Protein type: Adaptor/scaffold Chromosomal Location of Human Ortholog: 14q12 Cellular Component: nuclear membrane; sarcoplasmic reticulum; perinuclear region of cytoplasm; cytoplasm; T-tubule; nuclear envelope; caveola Molecular Function: protein binding; protein anchor; protein kinase A binding; protein complex scaffold; adenylate cyclase binding Biological Process: regulation of action potential; cAMP-mediated signaling; negative regulation of cAMP biosynthetic process; positive regulation of NFAT protein import into nucleus; positive regulation of release of sequestered calcium ion into cytosol; positive regulation of cell growth; positive regulation of protein phosphatase type 2B activity; protein targeting
Research Articles on AKAP6	**1.** This study expands our understanding of the regulation of MEF2 in skeletal muscle and identifies the mAKAP scaffold as a facilitator of MEF2 transcription and myogenic differentiation.

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