ARFGEF1 siRNA – Brefeldin A-Inhibited Guanine Nucleotide-Exchange Protein 1 (Human)

PRODUCT OVERVIEW

Product Name	ARFGEF1, siRNA
Full Product Name	ARFGEF1 siRNA (Human)
Product Gene Name	ARFGEF1 sirna
Product Synonym Names	ARFGEP1; BIG1; Brefeldin A-inhibited guanine nucleotide-exchange protein 1; Brefeldin A-inhibited GEP 1; ADP-ribosylation factor guanine nucleotide-exchange factor 1; p200 ARF guanine nucleotide exchange factor; p200 ARF-GEP1
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ARFGEF1 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	208,767 Da
OMIM	604141
3D Structure	ModBase 3D Structure for Q9Y6D6
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 ARFGEF1 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 ARFGEF1 sirna	RNA Interference (RNAi)
Related Product Information for ARFGEF1 sirna	MBS8202144 is an siRNA targeting ARFGEF1. Also known as ARFGEF1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit ARFGEF1 expression using RNA interference
Other Notes	Small volumes of ARFGEF1 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 ARFGEF1. It may not necessarily be applicable to this product.

NCBI GI #	51479145
NCBI GeneID	10565
NCBI Accession #	NP_006412.2
UniProt Primary Accession #	Q9Y6D6
UniProt Secondary Accession #	Q9NV46; Q9UFV2; Q9UNL0
UniProt Related Accession #	Q9Y6D6
GenBank Nucleotide #	NM_006421.4
NCBI Official Full Name	brefeldin A-inhibited guanine nucleotide-exchange protein 1
NCBI Official Synonym Full Names	ADP-ribosylation factor guanine nucleotide-exchange factor 1 (brefeldin A-inhibited)
NCBI Official Symbol	ARFGEF1
NCBI Official Synonym Symbols	BIG1; P200; ARFGEP1
UniProt Protein Name	Brefeldin A-inhibited guanine nucleotide-exchange protein 1
UniProt Synonym Protein Names	ADP-ribosylation factor guanine nucleotide-exchange factor 1; p200 ARF guanine nucleotide exchange factor; p200 ARF-GEP1
UniProt Gene Name	ARFGEF1
UniProt Synonym Gene Names	ARFGEP1; BIG1; Brefeldin A-inhibited GEP 1
UniProt Entry Name	BIG1_HUMAN
NCBI Protein Information	brefeldin A-inhibited guanine nucleotide-exchange protein 1
NCBI Summary for ARFGEF1	ADP-ribosylation factors (ARFs) play an important role in intracellular vesicular trafficking. The protein encoded by this gene is involved in the activation of ARFs by accelerating replacement of bound GDP with GTP. It contains a Sec7 domain, which may be responsible for guanine-nucleotide exchange activity and also brefeldin A inhibition. [provided by RefSeq, Aug 2011]
UniProt Comments for ARFGEF1	ARFGEF1: Promotes guanine-nucleotide exchange on ARF1 and ARF3. Promotes the activation of ARF1/ARF3 through replacement of GDP with GTP. Involved in vesicular trafficking. Required for the maintenance of Golgi structure; the function may be independent of its GEF activity. Required for the maturaion of integrin beta-1 in the Golgi. Involved in the establishment and persistence of cell polarity during directed cell movement in wound healing. Proposed to act as A kinase-anchoring protein (AKAP) and may mediate crosstalk between Arf and PKA pathways. Inhibits GAP activity of MYO9B probably through competetive RhoA binding. The function in the nucleus remains to be determined. Protein type: Nucleolus; GEFs; GEFs, ARF Chromosomal Location of Human Ortholog: 8q13 Cellular Component: small nuclear ribonucleoprotein complex; nucleoplasm; Golgi membrane; Golgi apparatus; nuclear matrix; perinuclear region of cytoplasm; cytoplasm; nucleolus; trans-Golgi network; cytosol Molecular Function: protein binding; myosin binding; guanyl-nucleotide exchange factor activity; ARF guanyl-nucleotide exchange factor activity Biological Process: vesicle-mediated transport; protein transport; exocytosis; negative regulation of actin filament polymerization; endomembrane organization; regulation of ARF protein signal transduction; Golgi organization and biogenesis; positive regulation of GTPase activity
Research Articles on ARFGEF1	**1.** Arf guanine nucleotide-exchange factors BIG1 and BIG2 regulate nonmuscle myosin IIA activity by anchoring myosin phosphatase complex.

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