ABCG1 siRNA – ATP-Binding Cassette Sub-Family G Member 1 Isoform 4 (Human)

PRODUCT OVERVIEW

Product Name	ABCG1, siRNA
Full Product Name	ABCG1 siRNA (Human)
Product Gene Name	ABCG1 sirna
Product Synonym Names	ABC8; WHT1; ATP-binding cassette sub-family G member 1; ATP-binding cassette transporter 8; White protein homolog
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ABCG1 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	86,628 Da
OMIM	603076
3D Structure	ModBase 3D Structure for P45844
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 ABCG1 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 ABCG1 sirna	RNA Interference (RNAi)
Related Product Information for ABCG1 sirna	MBS8214950 is an siRNA targeting ABCG1. Also known as ABCG1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit ABCG1 expression using RNA interference
Other Notes	Small volumes of ABCG1 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 ABCG1. It may not necessarily be applicable to this product.

NCBI GI #	46592915
NCBI GeneID	9619
NCBI Accession #	NP_004906.3
UniProt Primary Accession #	P45844
UniProt Secondary Accession #	Q86SU8; Q96L76; Q9BXK6; Q9BXK7; Q9BXK8; Q9BXK9; Q9BXL0; Q9BXL1; Q9BXL2; Q9BXL3; Q9BXL4
UniProt Related Accession #	P45844
GenBank Nucleotide #	NM_004915.3
NCBI Official Full Name	ATP-binding cassette sub-family G member 1 isoform 4
NCBI Official Synonym Full Names	ATP-binding cassette, sub-family G (WHITE), member 1
NCBI Official Symbol	ABCG1
NCBI Official Synonym Symbols	ABC8; WHITE1
UniProt Protein Name	ATP-binding cassette sub-family G member 1
UniProt Synonym Protein Names	ATP-binding cassette transporter 8; White protein homolog
Protein Family	ABC transporter G family
UniProt Gene Name	ABCG1
UniProt Synonym Gene Names	ABC8; WHT1
UniProt Entry Name	ABCG1_HUMAN
NCBI Protein Information	ATP-binding cassette sub-family G member 1
NCBI Summary for ABCG1	The protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the White subfamily. It is involved in macrophage cholesterol and phospholipids transport, and may regulate cellular lipid homeostasis in other cell types. Six alternative splice variants have been identified. [provided by RefSeq, Jul 2008]
UniProt Comments for ABCG1	ABCG1: Transporter involved in macrophage lipid homeostasis. Is an active component of the macrophage lipid export complex. Could also be involved in intracellular lipid transport processes. The role in cellular lipid homeostasis may not be limited to macrophages. Belongs to the ABC transporter superfamily. ABCG family. Eye pigment precursor importer (TC 3.A.1.204) subfamily. 8 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Membrane protein, multi-pass; Transporter; Transporter, ABC family Chromosomal Location of Human Ortholog: 21q22.3 Cellular Component: Golgi membrane; nucleoplasm; Golgi apparatus; endoplasmic reticulum membrane; recycling endosome; mitochondrion; intracellular membrane-bound organelle; integral to plasma membrane; plasma membrane; endosome; external side of plasma membrane Molecular Function: protein dimerization activity; protein binding; protein homodimerization activity; phospholipid transporter activity; protein heterodimerization activity; cholesterol transporter activity; cholesterol binding; toxin transporter activity; sterol-transporting ATPase activity; phospholipid binding; ADP binding; ATP binding Biological Process: cholesterol metabolic process; detection of hormone stimulus; response to high density lipoprotein stimulus; positive regulation of cholesterol biosynthetic process; lipoprotein metabolic process; cholesterol efflux; intracellular cholesterol transport; response to lipid; response to organic substance; cholesterol homeostasis; amyloid precursor protein catabolic process; reverse cholesterol transport; regulation of transcription, DNA-dependent; phospholipid efflux; transmembrane transport; phospholipid homeostasis
Research Articles on ABCG1	**1.** Ang-(1-7) upregulates ABCA1 and ABCG1 expression.

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