TBXAS1 siRNA – Thromboxane-A Synthase Isoform 1 (Human)

PRODUCT OVERVIEW

Product Name	TBXAS1, siRNA
Full Product Name	TBXAS1 siRNA (Human)
Product Gene Name	TBXAS1 sirna
Product Synonym Names	CYP5; CYP5A1; Thromboxane-A synthase; TXA synthase; TXS; Cytochrome P450 5A1
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TBXAS1 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	52,287 Da
OMIM	231095
3D Structure	ModBase 3D Structure for P24557
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 TBXAS1 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 TBXAS1 sirna	RNA Interference (RNAi)
Related Product Information for TBXAS1 sirna	MBS8228183 is an siRNA targeting TBXAS1. Also known as TBXAS1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit TBXAS1 expression using RNA interference
Other Notes	Small volumes of TBXAS1 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 TBXAS1. It may not necessarily be applicable to this product.

NCBI GI #	195972898
NCBI GeneID	6916
NCBI Accession #	NP_001052.2
UniProt Primary Accession #	P24557
UniProt Secondary Accession #	O14987; Q16843; Q16844; Q8IUN1; Q96CN2; Q9GZW4; Q9HD77; B4DJG6; E7EMU9; E7EP08; E7ESB5
UniProt Related Accession #	P24557
GenBank Nucleotide #	NM_001061.4
NCBI Official Full Name	thromboxane-A synthase isoform 1
NCBI Official Synonym Full Names	thromboxane A synthase 1 (platelet)
NCBI Official Symbol	TBXAS1
NCBI Official Synonym Symbols	TS; TXS; CYP5; THAS; TXAS; CYP5A1; GHOSAL; BDPLT14
UniProt Protein Name	Thromboxane-A synthase
UniProt Synonym Protein Names	Cytochrome P450 5A1
Protein Family	Thromboxane-A synthase
UniProt Gene Name	TBXAS1
UniProt Synonym Gene Names	CYP5; CYP5A1; TXA synthase; TXS
UniProt Entry Name	THAS_HUMAN
NCBI Protein Information	thromboxane-A synthase
NCBI Summary for TBXAS1	This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. However, this protein is considered a member of the cytochrome P450 superfamily on the basis of sequence similarity rather than functional similarity. This endoplasmic reticulum membrane protein catalyzes the conversion of prostglandin H2 to thromboxane A2, a potent vasoconstrictor and inducer of platelet aggregation. The enzyme plays a role in several pathophysiological processes including hemostasis, cardiovascular disease, and stroke. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008]
UniProt Comments for TBXAS1	TBXAS1: Defects in TBXAS1 are the cause of Ghosal hematodiaphyseal dysplasia (GHDD). GHDD is a rare autosomal recessive disorder characterized by increased bone density with predominant diaphyseal involvement and aregenerative corticosteroid-sensitive anemia. Aregenerative anemia is characterized by bone marrow failure, so that functional marrow cells are regenerated slowly or not at all. Defects in TBXAS1 are the cause of thromboxane synthetase deficiency (TBXAS1 deficiency). It is characterized by hemorrhagic diathesis. Belongs to the cytochrome P450 family. Protein type: Lipid Metabolism - arachidonic acid; Isomerase; Membrane protein, multi-pass; Membrane protein, integral; Oxidoreductase; EC 5.3.99.5 Chromosomal Location of Human Ortholog: 7q34-q35 Cellular Component: endoplasmic reticulum membrane; integral to membrane Molecular Function: oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen; thromboxane-A synthase activity; iron ion binding; heme binding; monooxygenase activity Biological Process: xenobiotic metabolic process; cyclooxygenase pathway; icosanoid metabolic process; positive regulation of vasoconstriction; arachidonic acid metabolic process; cellular chloride ion homeostasis Disease: Ghosal Hematodiaphyseal Dysplasia; Bleeding Disorder, Platelet-type, 14

Research Articles on TBXAS1	**1.** The carriage of Thromboxane A synthase 1 gene polymorphism AA was shown to affect the risk of clopidogrel resistance.
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