ZFPM2 siRNA – Zinc Finger Protein ZFPM2 (Human)

PRODUCT OVERVIEW

Product Name	ZFPM2, siRNA
Full Product Name	ZFPM2 siRNA (Human)
Product Gene Name	ZFPM2 sirna
Product Synonym Names	FOG2; ZNF89B; Zinc finger protein ZFPM2; Friend of GATA protein 2; FOG-2; Friend of GATA 2; hFOG-2; Zinc finger protein 89B; Zinc finger protein multitype 2
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ZFPM2 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	113,229 Da
OMIM	187500
3D Structure	ModBase 3D Structure for Q8WW38
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 ZFPM2 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 ZFPM2 sirna	RNA Interference (RNAi)
Related Product Information for ZFPM2 sirna	MBS8217111 is an siRNA targeting ZFPM2. Also known as ZFPM2 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit ZFPM2 expression using RNA interference
Other Notes	Small volumes of ZFPM2 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 ZFPM2. It may not necessarily be applicable to this product.

NCBI GI #	223890230
NCBI GeneID	23414
NCBI Accession #	NP_036214.2
UniProt Primary Accession #	Q8WW38
UniProt Secondary Accession #	Q32MA6; Q9NPL7; Q9NPS4; Q9UNI5
UniProt Related Accession #	Q8WW38
GenBank Nucleotide #	NM_012082.3
NCBI Official Full Name	zinc finger protein ZFPM2
NCBI Official Synonym Full Names	zinc finger protein, FOG family member 2
NCBI Official Symbol	ZFPM2
NCBI Official Synonym Symbols	DIH3; FOG2; SRXY9; ZNF89B; hFOG-2; ZC2HC11B
UniProt Protein Name	Zinc finger protein ZFPM2
UniProt Synonym Protein Names	Friend of GATA protein 2; FOG-2; Friend of GATA 2; hFOG-2; Zinc finger protein 89B; Zinc finger protein multitype 2
Protein Family	Zinc finger protein
UniProt Gene Name	ZFPM2
UniProt Synonym Gene Names	FOG2; ZNF89B; FOG-2; Friend of GATA 2; hFOG-2
UniProt Entry Name	FOG2_HUMAN
NCBI Protein Information	zinc finger protein ZFPM2
NCBI Summary for ZFPM2	The zinc finger protein encoded by this gene is a widely expressed member of the FOG family of transcription factors. The family members modulate the activity of GATA family proteins, which are important regulators of hematopoiesis and cardiogenesis in mammals. It has been demonstrated that the protein can both activate and down-regulate expression of GATA-target genes, suggesting different modulation in different promoter contexts. A related mRNA suggests an alternatively spliced product but this information is not yet fully supported by the sequence. [provided by RefSeq, Jul 2008]

UniProt Comments for ZFPM2	FOG2: Transcription regulator that plays a central role in heart morphogenesis and development of coronary vessels from epicardium, by regulating genes that are essential during cardiogenesis. Essential cofactor that acts via the formation of a heterodimer with transcription factors of the GATA family GATA4, GATA5 and GATA6. Such heterodimer can both activate or repress transcriptional activity, depending on the cell and promoter context. Also required in gonadal differentiation, possibly be regulating expression of SRY. Probably acts a corepressor of NR2F2. Defects in ZFPM2 may be a cause of tetralogy of Fallot (TOF). TOF is a congenital heart anomaly which consists of pulmonary stenosis, ventricular septal defect, dextroposition of the aorta (aorta is on the right side instead of the left) and hypertrophy of the right ventricle. This condition results in a blue baby at birth due to inadequate oxygenation. Surgical correction is emergent. Defects in ZFPM2 are the cause of diaphragmatic hernia 3 (DIH3); a form of congenital diaphragmatic hernia (CDH). CDH refers to a group of congenital defects in the structural integrity of the diaphragm associated with often lethal pulmonary hypoplasia and pulmonary hypertension. Belongs to the FOG (Friend of GATA) family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: C2H2-type zinc finger protein; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 8q23 Cellular Component: nucleoplasm; cytoplasm; nucleus Molecular Function: protein binding; DNA binding; zinc ion binding; transcription corepressor activity; transcription factor binding Biological Process: transcription, DNA-dependent; in utero embryonic development; gonadal mesoderm development; embryonic organ development; positive regulation of transcription from RNA polymerase II promoter; negative regulation of transcription from RNA polymerase II promoter; vasculogenesis; negative regulation of transcription, DNA-dependent; negative regulation of fat cell differentiation; blood coagulation; lung development Disease: Tetralogy Of Fallot; 46,xy Sex Reversal 9; Diaphragmatic Hernia 3
Research Articles on ZFPM2	**1.** Whole exome sequencing identified independent missense mutations in FOG2 in two patients with 46,XY gonadal dysgenesis.
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