SETD1B siRNA – Histone-Lysine N-Methyltransferase SETD1B (Human)

PRODUCT OVERVIEW

Product Name	SETD1B, siRNA
Full Product Name	SETD1B siRNA (Human)
Product Gene Name	SETD1B sirna
Product Synonym Names	KIAA1076; KMT2G; SET1B; Histone-lysine N-methyltransferase SETD1B; Lysine N-methyltransferase 2G; SET domain-containing protein 1B; hSET1B
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	SETD1B 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	208,732 Da
OMIM	611055
3D Structure	ModBase 3D Structure for Q9UPS6
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 SETD1B 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 SETD1B sirna	RNA Interference (RNAi)
Related Product Information for SETD1B sirna	MBS8237803 is an siRNA targeting SETD1B. Also known as SETD1B siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit SETD1B expression using RNA interference
Other Notes	Small volumes of SETD1B 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 SETD1B. It may not necessarily be applicable to this product.

NCBI GI #	210032580
NCBI GeneID	23067
NCBI Accession #	NP_055863.1
UniProt Primary Accession #	Q9UPS6
UniProt Secondary Accession #	F6MFW1
UniProt Related Accession #	Q9UPS6
GenBank Nucleotide #	NM_015048.1
NCBI Official Full Name	histone-lysine N-methyltransferase SETD1B
NCBI Official Synonym Full Names	SET domain containing 1B
NCBI Official Symbol	SETD1B
NCBI Official Synonym Symbols	KMT2G; Set1B
UniProt Protein Name	Histone-lysine N-methyltransferase SETD1B
UniProt Synonym Protein Names	Lysine N-methyltransferase 2G; SET domain-containing protein 1B; hSET1B
Protein Family	Histone-lysine N-methyltransferase
UniProt Gene Name	SETD1B
UniProt Synonym Gene Names	KIAA1076; KMT2G; SET1B; hSET1B
UniProt Entry Name	SET1B_HUMAN
NCBI Protein Information	histone-lysine N-methyltransferase SETD1B
NCBI Summary for SETD1B	SET1B is a component of a histone methyltransferase complex that produces trimethylated histone H3 at Lys4 (Lee et al., 2007 [PubMed 17355966]).[supplied by OMIM, Mar 2008]
UniProt Comments for SETD1B	SETD1B: Histone methyltransferase that specifically methylates 'Lys-4' of histone H3, when part of the SET1 histone methyltransferase (HMT) complex, but not if the neighboring 'Lys- 9' residue is already methylated. H3 'Lys-4' methylation represents a specific tag for epigenetic transcriptional activation. The non-overalpping localization with SETD1A suggests that SETD1A and SETD1B make non-redundant contributions to the epigenetic control of chromatin structure and gene expression. Specifically tri-methylates 'Lys-4' of histone H3 in vitro. Protein type: Methyltransferase; Amino Acid Metabolism - lysine degradation; Methyltransferase, protein lysine; EC 2.1.1.43 Chromosomal Location of Human Ortholog: 12q24.31 Cellular Component: nucleoplasm; histone methyltransferase complex; cytoplasm; nuclear speck; chromosome Molecular Function: protein binding; RNA binding; histone lysine N-methyltransferase activity (H3-K4 specific); nucleotide binding Biological Process: establishment and/or maintenance of chromatin architecture; regulation of transcription, DNA-dependent; transcription, DNA-dependent; histone H3-K4 methylation
Research Articles on SETD1B	**1.** We analyzed SETD1B expression in gastric and colorectal cancer. Loss of SETD1B was identified in 15% to 55% of the GC and CRC with respect to the microsatellite instability status. Loss of expression was more common in those with SETD1B mutations.
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