TPMT siRNA – Thiopurine S-Methyltransferase (Mouse)

PRODUCT OVERVIEW

Product Name	TPMT, siRNA
Full Product Name	TPMT siRNA (Mouse)
Product Gene Name	TPMT sirna
Product Synonym Names	Thiopurine S-methyltransferase; Thiopurine methyltransferase
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TPMT siRNA (Mouse) 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	27,586 Da
3D Structure	ModBase 3D Structure for O55060
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 mouse TPMT 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 TPMT sirna	RNA Interference (RNAi)
Related Product Information for TPMT sirna	MBS8201550 is an siRNA targeting TPMT. Also known as TPMT siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit TPMT expression using RNA interference
Other Notes	Small volumes of TPMT 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 TPMT. It may not necessarily be applicable to this product.

NCBI GI #	253795504

NCBI GeneID	22017
NCBI Accession #	NP_058065.2
UniProt Primary Accession #	O55060
UniProt Secondary Accession #	Q9JIL7; Q9QUG7
UniProt Related Accession #	O55060
GenBank Nucleotide #	NM_016785.2
NCBI Official Full Name	thiopurine S-methyltransferase
NCBI Official Synonym Full Names	thiopurine methyltransferase
NCBI Official Symbol	Tpmt
NCBI Official Synonym Symbols	AW106912
UniProt Protein Name	Thiopurine S-methyltransferase
UniProt Synonym Protein Names	Thiopurine methyltransferase
UniProt Gene Name	Tpmt
UniProt Entry Name	TPMT_MOUSE
NCBI Protein Information	thiopurine S-methyltransferase
UniProt Comments for TPMT	TPMT: Catalyzes the S-methylation of thiopurine drugs such as 6-mercaptopurine. Defects in TPMT are the cause of thiopurine S- methyltransferase deficiency (TPMT deficiency). TPMT is an enzyme involved in the normal metabolic inactivation of thiopurine drugs. These drugs are generally used as immunosupressants or cytotoxic drugs and are prescribed for a variety of clinical conditions including leukemia, autoimmune disease and organ transplantation. Patients with intermediate or no TPMT activity are at risk of toxicity after receiving standard doses of thiopurine drugs and it is shown that inter-individual differences in response to these drugs are largely determined by genetic variation at the TPMT locus. Belongs to the methyltransferase superfamily. TPMT family. Protein type: Xenobiotic Metabolism - drug metabolism - other enzymes; EC 2.1.1.67; Methyltransferase Cellular Component: cytoplasm Molecular Function: thiopurine S-methyltransferase activity; transferase activity; methyltransferase activity; S-adenosylmethionine-dependent methyltransferase activity Biological Process: methylation
Research Articles on TPMT	**1.** These findings support the notion that germline polymorphisms in Tpmt affect not only host tissue toxicity but also antitumor effectiveness.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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