

Product datasheet for **TR302860**

MTH1 (NUDT1) Human shRNA Plasmid Kit (Locus ID 4521)

Product data:

Product Type:	shRNA Plasmids
Product Name:	MTH1 (NUDT1) Human shRNA Plasmid Kit (Locus ID 4521)
Locus ID:	4521
Synonyms:	MTH1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	NUDT1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 4521). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_002452 , NM_198948 , NM_198949 , NM_198950 , NM_198952 , NM_198953 , NM_198954 , NM_198952.1 , NM_002452.1 , NM_002452.2 , NM_002452.3 , NM_198948.1 , NM_198949.1 , NM_198950.1 , NM_198953.1 , NM_198954.1 , BC014618 , BC014618.2 , BC051375 , BC051375.1 , BC040144 , BC022818 , BC065367 , BM927392 , NM_001367553 , NM_001367554 , NM_001367555 , NR_160264
UniProt ID:	P36639
Summary:	Misincorporation of oxidized nucleoside triphosphates into DNA/RNA during replication and transcription can cause mutations that may result in carcinogenesis or neurodegeneration. The protein encoded by this gene is an enzyme that hydrolyzes oxidized purine nucleoside triphosphates, such as 8-oxo-dGTP, 8-oxo-dATP, 2-hydroxy-dATP, and 2-hydroxy rATP, to monophosphates, thereby preventing misincorporation. The encoded protein is localized mainly in the cytoplasm, with some in the mitochondria, suggesting that it is involved in the sanitization of nucleotide pools both for nuclear and mitochondrial genomes. Several alternatively spliced transcript variants, some of which encode distinct isoforms, have been identified. Additional variants have been observed, but their full-length natures have not been determined. A rare single-nucleotide polymorphism that results in the production of an additional, longer isoform (p26) has been described. [provided by RefSeq, Dec 2018]



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- shRNA Design:** These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).
- Performance Guaranteed:** OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.
- For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).