

Product datasheet for RC212808

MTH1 (NUDT1) (NM_198953) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTH1 (NUDT1) (NM_198953) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MTH1
Synonyms:	MTH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC212808 representing NM_198953 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGGCGCCTCCAGGCTCTATACCCTGGTCTGGTCTGCAGCCTCAGCGAGTTCTCTGGGCATGAAAA
AGCGAGGCTTCGGGGCCGCGGTGGAATGGCTTTGGGGCAAAGTGCAAGAAGGAGAGACCATCGAGGA
TGGGGCTAGGAGGGAGCTGCAGGAGGAGAGCGGTCTGACAGTGGACGCCCTGCACAAGGTGGCCAGATC
GTGTTTGAGTTCTGGGCGAGCCTGAGCTCATGGACGTGCATGTCTTCTGCACAGACAGCATCCAGGGGA
CCCCCGTGGAGAGCGACGAAATGCGCCCATGCTGGTTCAGCTGGATCAGATCCCCTTCAAGGACATGTG
GCCCGACGACAGCTACTGGTTTCACTCCTGCTTCAGAAGAAGAAATCCACGGGTACTTCAAGTCCAG
GGTCAGGACACCATCCTGGACTACACACTCCGCGAGGTGGACACGGTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>RC212808 representing NM_198953 Red=Cloning site Green=Tags(s)
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MGASRLYTLVLLVLPQRVLLGMKKRFGFAGRWNGFGGKVQEGETIEDGARRELQEESGLTVDALHKVQGI
VFEFVGEPELMDVHVVFCTDSIQGTPVESDEMPCWFQLDQIPFKDMWPDDSYWFPLLLQKKKFKHGYFKFQ
GQDTILDYTLREVDTV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

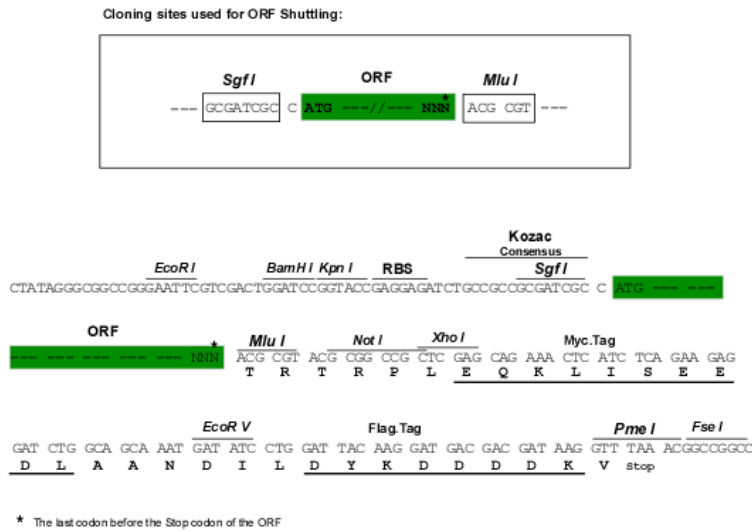
Chromatograms:	https://cdn.origene.com/chromatograms/mk6454_c08.zip
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[View online >](#)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_198953

ORF Size: 468 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_198953.1](#), [NP_945191.1](#)

RefSeq Size: 728 bp

RefSeq ORF: 471 bp

Locus ID: 4521

UniProt ID: [P36639](#)

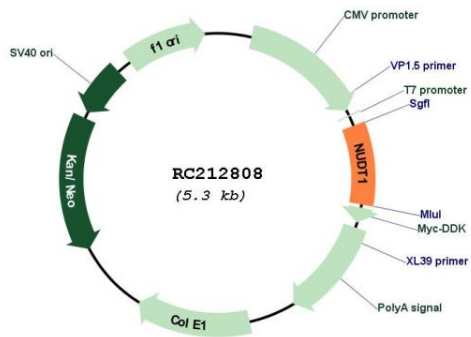
Cytogenetics: 7p22.3

Protein Families: Stem cell - Pluripotency

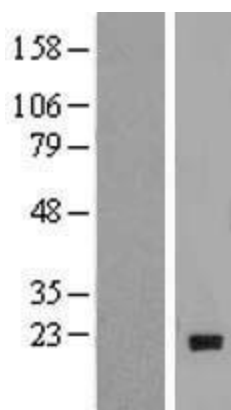
MW: 17.8 kDa

Gene 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]

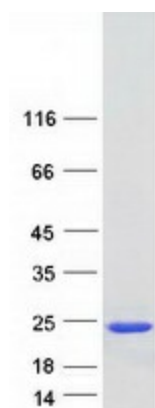
Product images:



Circular map for RC212808



Western blot validation of overexpression lysate (Cat# [LY404636]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212808 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NUDT1 protein (Cat# [TP312808]). The protein was produced from HEK293T cells transfected with NUDT1 cDNA clone (Cat# RC212808) using MegaTran 2.0 (Cat# [TT210002]).