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# Product datasheet for RC203309

## TPMT (NM_000367) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | TPMT (NM_000367) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | TPMT |
| **Synonyms:** | TPMTD |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC203309 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGATGGTACAAGAACTTCACTTGACATTGAAGAGTACTCGGATACTGAGGTACAGAAAAACCAAGTAC
TAACTCTGGAAGAATGGCAAGACAAGTGGGTGAACGGCAAGACTGCTTTTCATCAGGAACAAGGACATCA
GCTATTAAAGAAGCATTTAGATACTTTCCTTAAAGGCAAGAGTGGACTGAGGGTATTTTTTCCTCTTTGC
GGAAAAGCGGTTGAGATGAAATGGTTTGCAGACCGGGGACACAGTGTAGTTGGTGTGGAAATCAGTGAAC
TTGGGATACAAGAATTTTTTACAGAGCAGAATCTTTCTTACTCAGAAGAACCAATCACCGAAATTCCTGG
AACCAAAGTATTTAAGAGTTCTTCGGGGAACATTTCATTGTACTGTTGCAGTATTTTTGATCTTCCCAGG
ACAAATATTGGCAAATTTGACATGATTTGGGATAGAGGAGCATTAGTTGCCATTAATCCAGGTGATCGCA
AATGCTATGCAGATACAATGTTTTCCCTCCTGGGAAAGAAGTTTCAGTATCTCCTGTGTGTTCTTTCTTA
TGATCCAACTAAACATCCAGGTCCACCATTTTATGTTCCACATGCTGAAATTGAAAGGTTGTTTGGTAAA
ATATGCAATATACGTTGTCTTGAGAAGGTTGATGCTTTTGAAGAACGACATAAAAGTTGGGGAATTGACT
GTCTTTTTGAAAAGTTATATCTACTTACAGAAAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA


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**Protein Sequence:**

>RC203309 protein sequence
Red=Cloning site Green=Tags(s)

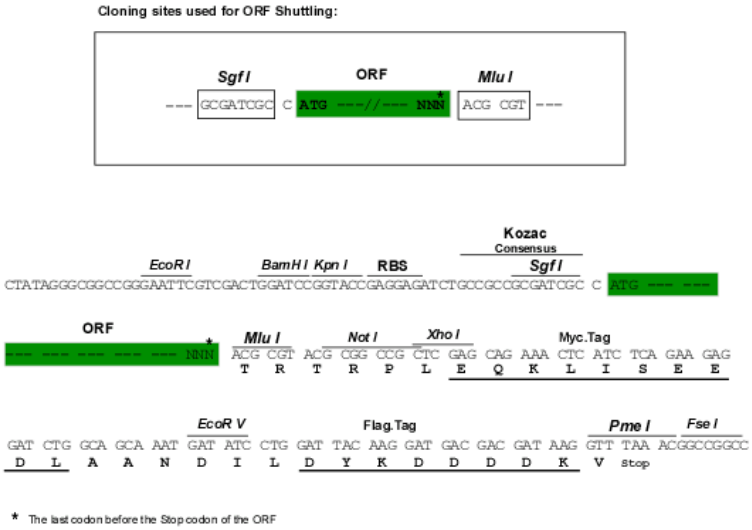
MDGTRTSLDIEEYSDTEVQKNQVLTLEEWQDKWVNGKTAFHQEQGHQLLKKHLDTFLKGKSGLRVFFPLC
GKAVEMKWFADRGHSVVGVEISELGIQEFFTEQNLSYSEEPITEIPGTKVFKSSSGNISLYCCSIFDLPR
TNIGKFDMIWDRGALVAINPGDRKCYADTMFSLLGKKFQYLLCVLSYDPTKHPGPPFYVPHAEIERLFGK
ICNIRCLEKVDAFEERHKSWGIDCLFEKLYLLTEK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6055_a04.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_000367

**ORF Size:** 735 bp

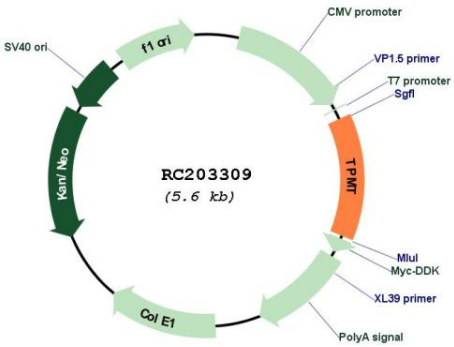
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

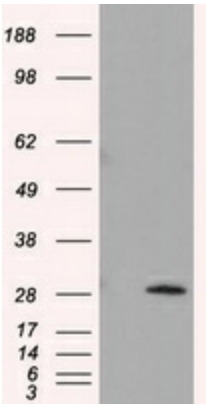
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

| | |
|---|---|
| **Reconstitution Method:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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. |
| **Note:** | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| **RefSeq:** | NM_000367.4 |
| **RefSeq Size:** | 3281 bp |
| **RefSeq ORF:** | 738 bp |
| **Locus ID:** | 7172 |
| **UniProt ID:** | P51580 |
| **Cytogenetics:** | 6p22.3 |
| **Protein Families:** | Druggable Genome |
| **Protein Pathways:** | Drug metabolism - other enzymes |
| **MW:** | 28.2 kDa |
| **Gene Summary:** | This gene encodes the enzyme that metabolizes thiopurine drugs via S-adenosyl-L-methionine as the S-methyl donor and S-adenosyl-L-homocysteine as a byproduct. Thiopurine drugs such as 6-mercaptopurine are used as chemotherapeutic agents. Genetic polymorphisms that affect this enzymatic activity are correlated with variations in sensitivity and toxicity to such drugs within individuals, causing thiopurine S-methyltransferase deficiency. Related pseudogenes have been identified on chromosomes 3, 18 and X. [provided by RefSeq, Aug 2014] |

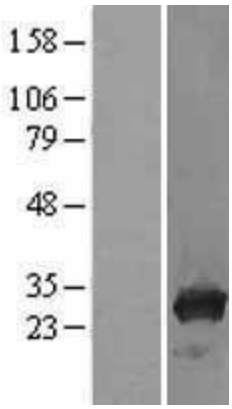
## Product images:



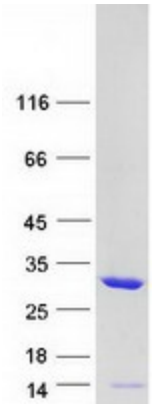

Circular map for RC203309




HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TPMT (Cat# RC203309, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TPMT(Cat# [TA500966]). Positive lysates [LY400131] (100ug) and [LC400131] (20ug) can be purchased separately from OriGene.




Western blot validation of overexpression lysate (Cat# [LY400131]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203309 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified TPMT protein (Cat# [TP303309]). The protein was produced from HEK293T cells transfected with TPMT cDNA clone (Cat# RC203309) using MegaTran 2.0 (Cat# [TT210002]).