

## Product datasheet for **RC207118**

### IMPDH1 (NM\_183243) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IMPDH1 (NM_183243) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IMPDH1
Synonyms:	IMPD; IMPD1; IMPDH-I; LCA11; RP10; sWSS2608
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC207118 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGAGGGGCCACTCACTCCACCACCGCTGCAGGGAGGCGGAGCCGCGTGTCCGGAGCCCGGAGCCC  
 GGCAACACCCGGACACGAGACGGCGGCCAGCGGTACAGCGCCGACTGCTGCAGGCGCGCTACGAGCC  
 CGAGAGCATGGCGGACTACCTGATCAGCGCGGCCACCGGTACGTGCCGAGGATGGGCTCACCGCGCAG  
 CAGCTCTTCGCCAGCGCCGACGGCTCACCTACAACGACTTCTGATTCTCCAGGATTCATAGACTTCA  
 TAGCTGATGAGGTGGACCTGACCTCAGCCCTGACCCGGAAGATCACGCTGAAGACGCCACTGATCTCCTC  
 CCCCATGGACACTGTGACAGAGGCTGACATGGCCATTGCCATGGCTCTGATGGGAGGTATTGGTTTCATT  
 CACCACAACGCACCCAGAGTCCAGGCCAACGAGGTGCGGAAGGTCAAGAAGTTTGAACAGGGCTTCA  
 TCAGGACCTGTGGTGTGAGCCCTCGCACACTGTGGCGATGTGCTGGAGGCCAAGATGCGGCATGG  
 CTTCTCTGGCATCCCCACTGAGACGGGCACCATGGGCAGCAAGCTGGTGGGCATCGTCACTCCCGA  
 GACATCGACTTTCTTGCTGAGAAGGACCACACCCTCCTCAGTGAGGTGATGACGCCAAGGATTGAAC  
 TGGTGGTGGCTCCAGCAGGTGTGACGTTGAAAGAGGCAAATGAGATCCTGCACGCTGAGCAAGAAAGGAA  
 GCTGCCTATCGTCAATGATTGCGATGAGCTGGTGGCCATCATCGCCCGCACCGACTGAAGAAGAACCGA  
 GACTACCTCTGGCTCCAAGGATCCCAGAAGCAGCTCCTCTGTGGGCGAGCTGTGGGCACCCGTGAGG  
 ATGACAAATACCGTCTGGACCTGCTCACCCAGGCGGGCTCGACGTCATAGTCTTGGACTCGTCCAAGG  
 GAATTCGGTGTATCAGATCGCCATGGTGCATTACATCAAACAGAAGTACCCACCTCCAGGTGATTGGG  
 GGAACGTGGTGACAGCAGCCAGGCCAAGAACCTGATTGATGCTGGTGTGGACGGGCTGCGCGTGGGA  
 TGGCTGCGGCTCCATCTGCATCACCCAGGAAGTGTGGCTGTGGTGGGCCCCAGGGCAGCTGCTGTGTA  
 CAAGGTGGCTGAGTATGCCCGGCCCTTTGGTGTGCCATCATAGCCGATGGCGGCATCCAGACCGTGGGA  
 CACGTGGTCAAGGCCCTGGCCCTTGAGGCTCCACAGTGTGATGGGCTCCCTGCTGGCCGCCACTACGG  
 AGGCCCTGGCGAGTACTTCTTCTCAGACGGGGTGCAGGCTCAAGAAGTACCGGGGCATGGGCTCACTGGA  
 TGCCATGGAGAAGAGCAGCAGCAGCCAGAAACGATACTTCAGCGAGGGGGATAAAGTGAAGATCGCGCAG  
 GGTGTCTCGGCTCCATCCAGGACAAAGGATCCATTGAGAAGTTCGTGCCCTACCTCATAGCAGGCATCC  
 AACACGGCTGCCAGGATATCGGGCCCGCAGCCTGTCTGTCTTCGGTCCATGATGACTCAGGAGAGCT  
 CAAGTTTGAGAAGCGGACCATGTGCGCCAGATTGAGGGTGGTCCATGGCCTGCACTCTTACGAAAAG  
 CGGCTGTAC

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC207118 protein sequence  
 Red=Cloning site Green=Tags(s)

MEGPLTPPPLQGGGAAAVPEPGARQHPGHETAARYSARLLQAGYEPESMADYLISSGTYVPEDGLTAQ  
 QLFASADGLTYNDFLILPGFIDFIADEVDLTSALTRKITLKTPLISSPMDTVTEADMAIAMALMGGIGFI  
 HHNCTPEFQANEVRKVKKFEQGFITDPVVLSPSHTVGDVLEAKMRHGFSGIPITETGTMGSKLVGIVTSR  
 DIDFLAEKDHTLLSEVMTPRIELVVAPAGVTLKEANEILQRSKKGKLPVNDCELVAIARTDLKKNR  
 DYPLASKDSQKQLLCGAAVGTREDDKYRLDLLTQAGVDVIVLDSQNSVYQIAMVHYIKQKYPHLQVIG  
 GNVVTAQAQKNLIDAGVDGLRVGMGCGSICITQEVMACGRPQGTAVYKVAEYARRFVPIIADGGIQTVG  
 HVVKALALGASTVMMGSLLAATTEAPGEYFFSDGVRLKKYRGMGSLDAMEKSSSSQKRYFSEGDKVKIAQ  
 GVSGSIQDKGSIQKFPYLIAGIQHGCQDIGARSLSVLRSMYSGELKFEKRTMSAQIEGGVHGLHSYEK  
 RLY

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6518\\_g04.zip](https://cdn.origene.com/chromatograms/mk6518_g04.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_183243

**ORF Size:** 1689 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\\_183243.3](#)

**RefSeq Size:** 2517 bp

**RefSeq ORF:** 1692 bp

**Locus ID:** 3614

**UniProt ID:** [P20839](#)

**Cytogenetics:** 7q32.1

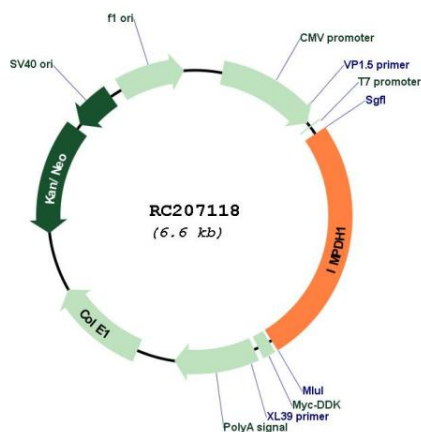
**Protein Families:** Druggable Genome

**Protein Pathways:** Drug metabolism - other enzymes, Metabolic pathways, Purine metabolism

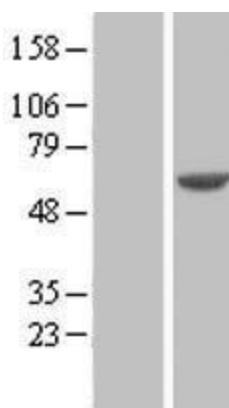
**MW:** 60.4 kDa

**Gene Summary:** The protein encoded by this gene acts as a homotetramer to regulate cell growth. The encoded protein is an enzyme that catalyzes the synthesis of xanthine monophosphate (XMP) from inosine-5'-monophosphate (IMP). This is the rate-limiting step in the de novo synthesis of guanine nucleotides. Defects in this gene are a cause of retinitis pigmentosa type 10 (RP10). Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Dec 2008]

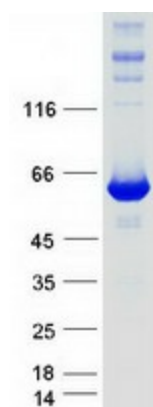
**Product images:**



Circular map for RC207118



Western blot validation of overexpression lysate (Cat# [LY405238]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207118 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IMPDH1 protein (Cat# [TP307118]). The protein was produced from HEK293T cells transfected with IMPDH1 cDNA clone (Cat# RC207118) using MegaTran 2.0 (Cat# [TT210002]).