

## Product datasheet for **RG207118**

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

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	IMPDH1 (NM_183243) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	IMPDH1
Synonyms:	IMPD; IMPD1; IMPDH-I; LCA11; RP10; sWSS2608
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG207118 representing NM\_183243  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGAGGGCCACTCACTCCACCACCGCTGCAGGGAGGCGGAGCCGCGTGTCCGGAGCCGGAGCCC  
 GGCAACACCCGGACACGAGACGGCGGCGCAGCGGTACAGCGCCGACTGCTGCAGGCCGGCTACGAGCC  
 CGAGAGCATGGCGGACTACCTGATCAGCGGCGGCACCGGTACGTGCCGAGGATGGGCTCACCGCGCAG  
 CAGCTCTTCGCCAGCGCCGACGGCTCACCTACAACGACTTCTGATTCTCCAGGATTCATAGACTTCA  
 TAGCTGATGAGGTGGACCTGACCTCAGCCCTGACCCGGAAGATCACGCTGAAGACGCCACTGATCTCCTC  
 CCCATGGACACTGTGACAGAGGCTGACATGGCCATTGCCATGGCTCTGATGGGAGGATTGGTTTCATT  
 CACCACAACGCACCCAGAGTCCAGGCCAACGAGGTGCGGAAGGTCAAGAAGTTGAACAGGGCTTCA  
 TCAGGACCTGTGGTGTGAGCCCTCGCACACTGTGGCGATGTGCTGGAGGCCAAGATGCGGCATGG  
 CTTCTCTGGCATCCCATCACTGAGACGGGCACCATGGGCAGCAAGCTGGTGGGCATCGTCACTCCCGA  
 GACATCGACTTTCTTGCTGAGAAGGACCACACCCTCCTCAGTGAGGTGATGACGCCAAGGATTGAAC  
 TGGTGGTGGCTCCAGCAGGTGTGACGTTGAAAGAGGCAAATGAGATCCTGCACGCTAGCAAGAAAGGAA  
 GCTGCCTATCGTCAATGATTGCGATGAGCTGGTGGCCATCATCGCCCGCACCGACTGAAGAAGAACCGA  
 GACTACCTCTGGCTCCAAGGATCCCAGAAGCAGCTCCTCTGTGGGCGAGCTGTGGGCACCCGTGAGG  
 ATGACAAATACCGTCTGGACCTGCTCACCCAGGCGGGCTCGACGTCATAGTCTTGGACTCGTCCCAAGG  
 GAATTCGGTGTATCAGATCGCCATGGTGCATTACATCAAACAGAAGTACCCACCTCCAGGTGATTGGG  
 GGAACGTGGTGACAGCAGCCAGGCCAAGAACCTGATTGATGCTGGTGTGGACGGGCTGCGCGTGGGA  
 TGGCTGCGGCTCCATCTGCATCACCCAGGAAGTGTGGCTGTGGTGGCCCGCCAGGCCACTGTGTGA  
 CAAGGTGGCTGAGTATGCCCGGCGCTTTGGTGTGCCATCATAGCCGATGGCGGCATCCAGACCGTGGGA  
 CACGTGGTCAAGGCCCTGGCCCTTGAGGCTCCACAGTGTGATGGGCTCCCTGCTGGCCGCCACTACGG  
 AGGCCCTGGCGAGTACTTCTTCTCAGACGGGGTGCAGCTCAAGAAGTACCGGGGCATGGGCTCACTGGA  
 TGCCATGGAGAAGAGCAGCAGCAGCCAGAAACGATACTTCAGCGAGGGGGATAAAGTGAAGATCGCGCAG  
 GGTGTCTCGGCTCCATCCAGGACAAAGGATCCATTGAGAAGTTCGTGCCCTACCTCATAGCAGGCATCC  
 AACACGGTCCAGGATATCGGGCCCGCAGCCTGTCTGTCTTCCGTCCATGATGACTCAGGAGAGCT  
 CAAGTTTGAGAAGCGGACCATGTGCGCCAGATTGAGGGTGGTCCATGGCCTGACTCTTACGAAAAG  
 CGGCTGTAC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG207118 representing NM\_183243  
 Red=Cloning site Green=Tags(s)

MEGPLTPPPLQGGAAAVPEPGARQHPGHETAARYSARLLQAGYEPESMADYLISSGGTGYVPEDGLTAQ  
 QLFASADGLTYNDFLILPGFIDFIADVDLTSALTRKILTKTPLISSPMDTVTEADMAIAMALMGGIGFI  
 HHNCTPEFQANEVRKVKKFEQGFITDPVVLSPSHTVGDVLEAKMRHGFSGIPITETGTMGSKLVGIVTSR  
 DIDFLAEKDHTLLSEVMTPRIELVVAPAGVTLKEANEILQRSKKGKLPVNDCCDELVAIARTDLKKNR  
 DYPLASKDSQKQLL CGAAVGTREDDKYRLDLLTQAGVDVIVLDSSQNSVYQIAMVHYIKQKYPHLQVIG  
 GNVVTAQAQKNLIDAGVDGLRVGMGCGSICITQEVMACGRPQGTAVYKVAEYARRFVPIIADGGIQTVG  
 HVVKALALGASTVMMGSLAATTEAPGEYFFSDGVRLKKYRGMGSLDAMEKSSSSQKRYFSEGDKVKIAQ  
 GVSGSIQDKGSIQKFPYLIAGIQHGCQDIGARSLSVLRSMYSGELKFEKRTMSAQIEGGVHGLHSYEK  
 RLY

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**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\\_183243.1](#), [NP\\_899066.1](#)

**RefSeq Size:** 2534 bp

**RefSeq ORF:** 1692 bp

**Locus ID:** 3614

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

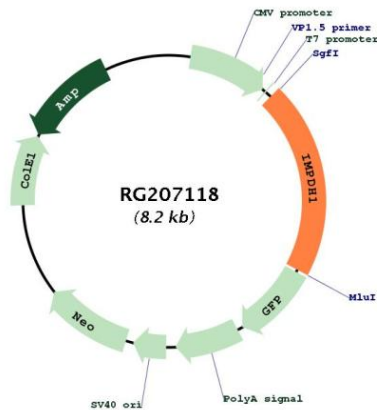
**Cytogenetics:** 7q32.1

**Protein Families:** Druggable Genome

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

**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 RG207118