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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)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGGGGCCACTCACTCCACCACCGCTGCAGGGAGGCGGAGCCGCCGCTGTTCCGGAGCCCGGAGCCC
GGCAACACCCGGGACACGAGACGGCGGCGCAGCGGTACAGCGCCCGACTGCTGCAGGCCGGCTACGAGCC
CGAGAGCATGGCGGACTACCTGATCAGCGGCGGCACCGGCTACGTGCCCGAGGATGGGCTCACCGCGCAG
CAGCTCTTCGCCAGCGCCGACGGCCTCACCTACAACGACTTCCTGATTCTCCCAGGATTCATAGACTTCA
TAGCTGATGAGGTGGACCTGACCTCAGCCCTGACCCGGAAGATCACGCTGAAGACGCCACTGATCTCCTC
CCCCATGGACACTGTGACAGAGGCTGACATGGCCATTGCCATGGCTCTGATGGGAGGTATTGGTTTCATT
CACCACAACTGCACCCCAGAGTTCCAGGCCAACGAGGTGCGGAAGGTCAAGAAGTTTGAACAGGGCTTCA
TCACGGACCCTGTGGTGCTGAGCCCCTCGCACACTGTGGGCGATGTGCTGGAGGCCAAGATGCGGCATGG
CTTCTCTGGCATCCCCATCACTGAGACGGGCACCATGGGCAGCAAGCTGGTGGGCATCGTCACCTCCCGA
GACATCGACTTTCTTGCTGAGAAGGACCACACCACCCTCCTCAGTGAGGTGATGACGCCAAGGATTGAAC
TGGTGGTGGCTCCAGCAGGTGTGACGTTGAAAGAGGCAAATGAGATCCTGCAGCGTAGCAAGAAAGGGAA
GCTGCCTATCGTCAATGATTGCGATGAGCTGGTGGCCATCATCGCCCGCACCGACCTGAAGAAGAACCGA
GACTACCCTCTGGCCTCCAAGGATTCCCAGAAGCAGCTCCTCTGTGGGGCAGCTGTGGGCACCCGTGAGG
ATGACAAATACCGTCTGGACCTGCTCACCCAGGCGGGCGTCGACGTCATAGTCTTGGACTCGTCCCAAGG
GAATTCGGTGTATCAGATCGCCATGGTGCATTACATCAAACAGAAGTACCCCCACCTCCAGGTGATTGGG
GGGAACGTGGTGACAGCAGCCCAGGCCAAGAACCTGATTGATGCTGGTGTGGACGGGCTGCGCGTGGGCA
TGGGCTGCGGCTCCATCTGCATCACCCAGGAAGTGATGGCCTGTGGTCGGCCCCAGGGCACTGCTGTGTA
CAAGGTGGCTGAGTATGCCCGGCGCTTTGGTGTGCCCATCATAGCCGATGGCGGCATCCAGACCGTGGGA
CACGTGGTCAAGGCCCTGGCCCTTGGAGCCTCCACAGTGATGATGGGCTCCCTGCTGGCCGCCACTACGG
AGGCCCCTGGCGAGTACTTCTTCTCAGACGGGGTGCGGCTCAAGAAGTACCGGGGCATGGGCTCACTGGA
TGCCATGGAGAAGAGCAGCAGCAGCCAGAAACGATACTTCAGCGAGGGGGATAAAGTGAAGATCGCGCAG
GGTGTCTCGGGCTCCATCCAGGACAAAGGATCCATTCAGAAGTTCGTGCCCTACCTCATAGCAGGCATCC
AACACGGCTGCCAGGATATCGGGGCCCGCAGCCTGTCTGTCCTTCGGTCCATGATGTACTCAGGAGAGCT
CAAGTTTGAGAAGCGGACCATGTCGGCCCAGATTGAGGGTGGTGTCCATGGCCTGCACTCTTACGAAAAG
CGGCTGTAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

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

MEGPLTPPPLQGGGAAAVPEPGARQHPGHETAAQRYSARLLQAGYEPESMADYLISGGTGYVPEDGLTAQ
QLFASADGLTYNDFLILPGFIDFIADEVDLTSALTRKITLKTPLISSPMDTVTEADMAIAMALMGGIGFI
HHNCTPEFQANEVRKVKKFEQGFITDPVVLSPSHTVGDVLEAKMRHGFSGIPITETGTMGSKLVGIVTSR
DIDFLAEKDHTTLLSEVMTPRIELVVAPAGVTLKEANEILQRSKKGKLPIVNDCDELVAIIARTDLKKNR
DYPLASKDSQKQLLCGAAVGTREDDKYRLDLLTQAGVDVIVLDSSQGNSVYQIAMVHYIKQKYPHLQVIG
GNVVTAAQAKNLIDAGVDGLRVGMGCGSICITQEVMACGRPQGTAVYKVAEYARRFGVPIIADGGIQTVG
HVVKALALGASTVMMGSLLAATTEAPGEYFFSDGVRLKKYRGMGSLDAMEKSSSSQKRYFSEGDKVKIAQ
GVSGSIQDKGSIQKFVPYLIAGIQHGCQDIGARSLSVLRSMMYSGELKFEKRTMSAQIEGGVHGLHSYEK
RLY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6518_g04.zip

Restriction Sites: SgfI-MluI

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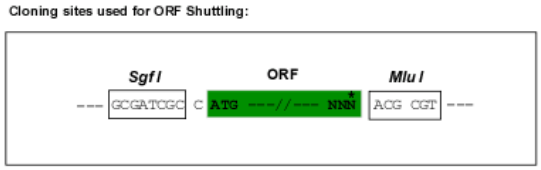
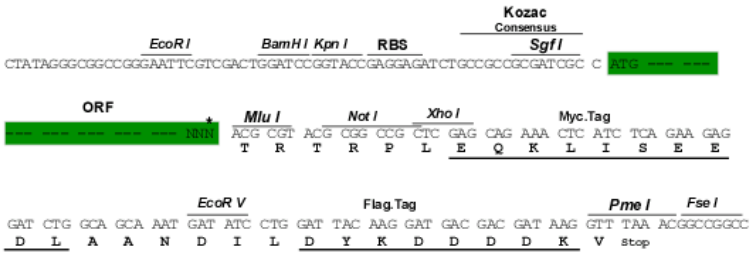
Cloning Scheme:





* The last codon before the Stop codon of the ORF

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_183243.3

RefSeq Size: 2517 bp

RefSeq ORF: 1692 bp

Locus ID: 3614

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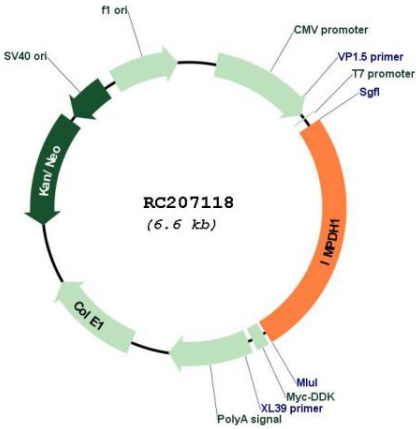
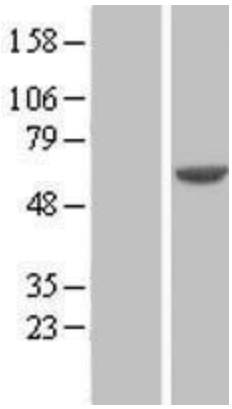
UniProt ID:	P20839
Cytogenetics:	7q32.1
Protein Families:	Druggable Genome
Protein Pathways:	Drug metabolism - other enzymes, Metabolic pathways, Purine metabolism
MW:	60.4 kDa
Gene Summary:	The protein encoded by this gene acts as a homotetramer to regulate cell growth. The encoded protein is an enzyme 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 un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207118 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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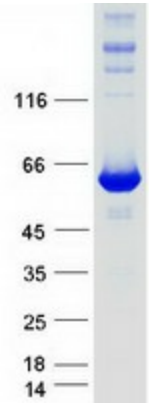

Coomassie blue staining of purified IMPDH1 protein (Cat# [TP307118]). The protein was produced from HEK293T cells transfected with IMPDH1 cDNA clone (Cat# RC207118) using MegaTran 2.0 (Cat# [TT210002]).

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