

Product datasheet for **SC119585**

IMPDH2 (NM_000884) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IMPDH2 (NM_000884) Human Untagged Clone
Tag:	Tag Free
Symbol:	IMPDH2
Synonyms:	IMPD2; IMPDH-II
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC119585 sequence for NM_000884 edited (data generated by NextGen Sequencing)

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ATGGCCGACTACCTGATTAGTGGGGCAGTCCTACGTGCCAGACGACGGACTCACAGCA
CAGCAGCTCTTCAACTGCGGAGACGGCCTCACCTACAATGACTTTCTATTCTCCCTGGG
TACATCGACTTCACTGCAGACCAGGTGGACCTGACTTCTGCTCTGACCAAGAAAATCACT
CTTAAGACCCCACTGGTTTCTCTCCCATTGGACACAGTCACAGAGGCTGGGATGGCCATA
GCAATGGCGCTTACAGGCGGTATTGGCTTCATCCACCACAACGTACACCTGAATCCAG
GCCAATGAAGTTCGGAAGTGAAGAAATATGAACAGGGATTCATCACAGACCCTGTGGTC
CTCAGCCCAAGGATCGCGTGCGGGATGTTTTGAGGCCAAGGCCCGGCATGTTTCTGTC
GGTATCCCAATCACAGACACAGGCCGGATGGGAGCCGCTTGGTGGGCATCATCTCTCC
AGGGACATTGATTTTCTCAAAGAGGAGGAACATGACTGTTTCTTGAAGAGATAATGACA
AAGAGGGAAGACTTGGTGGTAGCCCTGCAGGCATCACACTGAAGGAGGCAAATGAAATT
CTGCAGCGCAGCAAGAAGGAAAGTTGCCATTGTAATGAAGATGATGAGCTTGTGGCC
ATCATTGCCCGGACAGACCTGAAGAAGAATCGGGACTACCCACTAGCCTCAAAGATGCC
AAGAAACAGCTGTGTGGGGCAGCCATTGGCACTCATGAGGATGACAAGTATAGGCTG
GACTTGCTCGCCAGGCTGGTGTGGATGTAGTGGTTTTGGACTCTCCAGGGAAATTC
ATCTTCCAGATCAATATGATCAAGTACATCAAAGACAAATACCCTAATCTCCAAGTCATT
GGAGGCAATGTGGTCACTGCTGCCAGGCCAAGAACCTCATTGATGCAGGTGTGGATGCC
CTGCGGGTGGGCATGGGAAGTGGCTCCATCTGCATTACGCAGGAAGTGTGGCCTGTGGG
CGGCCCAAGCAACAGCAGTGTACAAGTGTGAGAGTATGCACGGCGCTTTGGTGTCCG
GTCATTGCTGATGGAGGAATCCAAAATGTGGTTCATATTGCGAAAGCCTTGGCCCTGGG
GCCTCCACAGTCATGATGGGCTCTCTCTGGCTGCCACCACTGAGGCCCTGGTGAATAC
TTCTTTCCGATGGGATCCGGCTAAAGAAATATCGCGGTATGGGTCTCTCGATGCCATG
GACAAGCACCTCAGCAGCCAGAACAGATATTTCACTGAAGCTGACAAAATCAAAGTGGCC
CAGGGAGTGTCTGGTGTGTGCAGGACAAAGGGTCAATCCACAAATTTGCCCTTACCTG
ATTGCTGGCATCCAACACTCATGCCAGGACATTGGTGCCAAGAGCTTGACCCAAGTCCGA
GCCATGATGACTCTGGGAGCTTAAGTTTGAGAAGAGAACGTCCTCAGCCAGGTGGAA
GGTGGCGTCCATAGCCTCCATTCGTATGAGAAGCGGCTTTTCTGA

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Clone variation with respect to NM_000884.2

5' Read Nucleotide Sequence: >OriGene 5' read for NM_000884 unedited

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CAAGGTTTTGTAATCCCNACCTCTGAGAGGGCGGCACGAGACTTCGGCAGGAGGTCTC
TGCGGGCGGGTCTCGGAGACACGCGGGGTGTCTGTGTTGGCCATGGCCGACTACCTG
ATTAGTGGGGCAGCTCTACGTGCCAGACGACGGACTCACAGCACAGCAGCTCTTCAAC
TGCGGAGACGGCCTCACCTACAATGACTTTCTCATTCTTTCTGGGTACATCGACTTCACT
GCAGACAGGTGGACCTGACTTCTGCTCTGACCAAGAAAATCACTTTAAGACCCCACTG
GTTTCTCTCCATGGACACAGTCACAGAGGCTGGGATGGCCATAGCAATGGCGCTTACA
GGCGGTATTGGCTTCATCCACCACAACGTACACCTGAATTCCAGGCCAATGAAGTTCGG
AAAGTGAAGAAATATGAACAGGGATTCATCACAGACCCTGTGGTCTCAGCCCAAGGAT
CGCGTGCGGGATGTTTTGAGGCCAAGGCCCGGCATGGTTTTCTGCGGTATCCCAATCACA
GACACAGGCCGGATGGGAGCCGCTTGGTGGGCATCATCTCTCCAGGGACATTGATTTT
CTCAAAGAGGAGGAACATGACTGTTTCTTGAAGAGATAATGACAAAGATGGAAGACTTG
GTGGTAGCCCTGCAGGCATCACACTGAAGGATGCAAATGATATTCTGCAGCGCAGCAAG
AAAGGGAAGTTGCCATTGGTAATGAAGATGATGAGCTTGTGGCCATCATTGCCCGACA
GACCTGGAGAAAATCGGGACTACCCACTAGCCTCAAAGATGCCAAGAACAGCTGCTGTG
TGGGGCAGCCATTGGCCCTCATGAAGATGACAAGTATAGGCTTGGACTTGCTCGCCCAAG
GCCGTTGTGATAGTATGGTTTTGGACTCTCCCAAGG

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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_000884 unedited NNNNAACACTCTGGACCCGCGGCCGCATNCTAGGATCGAGTTTTTTTTTTTTTTTTTTTCT TTCTAAACTTTTATTGAAAAAAAACCGAGGAGGTGTGCTGGATCCCTTTTCAGAAAAGC CGCTTCTCATACGAATGGAGGCTATGGACGCCACCTTCCACCTGGGCTGAGGACGTTCTC TTCTCAAACCTTAAGCTCCCAGAGTACATCATGGCTCGGACTTGGGTCAAGCTCTTGGA CCAATGTCCTGGCATGAGTGTGGATGCCAGCAATCAGGTAAGGGACAAAATTTGTGGATT GACCTTTTGTCTGCACAGCACCAGACACTCCCTGGGCCACTTTGATTTTGTGTCAGTTCA CTGAAATATCTGTTCTGGCTGCTGAGGTGCTTGTCCATGGCATCGAGAGAACCCATACCG CGATATTTCTTTAGCCGGATCCCATCGGAAAAGAAGTATTCACCGGGGCTCAGTGGTG GCAGCCAGGAGAGAGCCCATCATGACTGTGGAGGCCCAAGGGCCAAGGCTTTTCGCAATA TGACCCACATTTTGGATTCTCCATCAGCAATGACCGGAACACCAAAGCGCCGTGCATAC TCTGACACCTGTACTGCTGTGCTTGGGGCCGCCACAGGCCAGCACTTCTGCGTA ATGCAGATGGAGCCACTCCCATGCCACCCGAGGGCATCCACACCTGCATCAATGAGG TTCTTGGCCTGNGCAGCAGTGACCACATTGCCCTCAATGACTTGGAGATTAGGGTATTTG TCTTTGATGACTTGATCATATTGATCTGGAAGATGGAAATTCCTGGGAAGAGTNNCAA ACCACTACATCCACACAGCCTGGGCGAGCAAGTCAGCCTATACTGTCATCTNATGAGG
Restriction Sites:	NotI-NotI
ACCN:	NM_000884
Insert Size:	1570 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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:	<u>NM_000884.2</u> , <u>NP_000875.2</u>
RefSeq Size:	1712 bp
RefSeq ORF:	1545 bp
Locus ID:	3615
UniProt ID:	<u>P12268</u>
Cytogenetics:	3p21.31
Domains:	CBS, IMPDH
Protein Families:	Druggable Genome

Protein Pathways:

Drug metabolism - other enzymes, Metabolic pathways, Purine metabolism

Gene Summary:

This gene encodes the rate-limiting enzyme in the de novo guanine nucleotide biosynthesis. It is thus involved in maintaining cellular guanine deoxy- and ribonucleotide pools needed for DNA and RNA synthesis. The encoded protein catalyzes the NAD-dependent oxidation of inosine-5'-monophosphate into xanthine-5'-monophosphate, which is then converted into guanosine-5'-monophosphate. This gene is up-regulated in some neoplasms, suggesting it may play a role in malignant transformation. [provided by RefSeq, Jul 2008]