

## Product datasheet for SC116674

### IMPA1 (NM\_005536) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IMPA1 (NM_005536) Human Untagged Clone
Tag:	Tag Free
Symbol:	IMPA1
Synonyms:	IMP; IMPA; MRT59
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC116674 sequence for NM_005536 edited (data generated by NextGen Sequencing)

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ATGGCTGATCCTTGGCAGGAATGCATGGATTATGCAGTAAGCTCTAGCAAGACAAGCTGGA
GAGGTAGTTTGTGAAGCTATAAAAAATGAAATGAATGTTATGCTGAAAAGTTCTCCAGTT
GATTTGGTAACTGCTACGGACCAAAAAGTTGAAAAATGCTTATCTCTCCATAAAGGAA
AAGTATCCATCTCACAGTTTCATTGGTGAAGAATCTGTGGCAGCTGGGAAAAAAGTATC
TTAACCGACAACCCACATGGATCATTGACCCTATTGATGGAACAACCTAAGTTGTACAT
AGATTTCTTTTGTAGCTGTTTCAATTGGCTTTGCTGTAATAAAAAAGATAGAATTTGGA
GTTGTGTACAGTTGTGTGAAGGCAAGATGTACACTGCCAGAAAAGGAAAAGGTGCCTTT
TGTAATGGTCAAAAACACAAGTTTACAACAAGAAGATATTACCAAATCTCTCTTGGTG
ACTGAGTTGGGCTCTCCAGAACCAGAGACTGTGAGAATGGTTCTTTCTAATATGGAA
AAGCTTTTTTGCATTCTGTTTCATGGGATCCGGAGTGTTGGAACAGCAGCTGTTAATATG
TGCTTGTGGCAACTGGCGGAGCAGATGCATATTATGAAATGGGAATTCAGTCTGGGAT
GTTGCAGGAGCTGGCATTATTGTTACTGAAGCTGGTGGCGTGCTAATGGATGTTACAGGT
GGACCATTTGATTTGATGTCACGAAGAGTAATTGCTGCAATAATAGAATATTAGCAGAA
AGGATAGCTAAAGAAATTCAGGTTATACCTTTGCAACGAGACGACGAAGATTA

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Clone variation with respect to NM\_005536.3



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_005536 unedited  TTCGGATTTGTATACGACTCCTATAGGGCGGCCGGAATCGGCACGAGGCTCTACCTCCG  GAAGAGACGAGTGCAGTAAACACCGTTTACAGAGCTAGCCGGACGCTCTCCGACTCAAGAT  ATTTGTCAAATATTTTCAGAAGATGGCTGATCCTTGGCAGGAATGCATGGATTATGCAGT  AACTCTAGCAAGACAAGCTGGAGAGGTAGTTTGTGAAGCTATAAAAAATGAAATGAATGT  TATGCTGAAAAAGTTCTCCAGTTGATTTGGTAACTGCTACGGACCAAAAAGTTGAAAAAT  GCTTATCTCTCCATAAAGGAAAAAGTATCCATCTCACAGTTTCATTGGTGAAGAATCTGT  GGCAGCTGGGGAAAAAAGTATCTTAACCGACAACCCACATGGATCATTGACCCTATTGA  TGGAACTAACTTTGTACATAGATTTCTTTTGTAGCTGTTTCAATTGGCTTTGCTGT  AAATAAAAAGATAGAATTTGGAGTTGTGTACAGTTGTGTGGAAGGCAAGATGTACTACTGC  CAGAAAAGGAAAAGTGCCTTTTGTAAATGGTCAAAAACACAAGTTTACACAAGAAGA  TATTACCAAACTCTCTTGGTGACTGAGTTGNGCTCTCCAGAACACCAGAGACTGTGAG  AATGGNTCTTTCTAATATGGAAGCCTTTTTGCATTCTGTTTCATGGGATCCGGAGTGT  TGGAACAGCAGCTGTTAATATGTGCCTTGTGGGACTGGCGGAGCAGATGCATATTATGA  AATGGGAATTTCACTGCTGGGATGTTGCCAGAGCTGCCATTATTGNTACTGAAAGCTGTG  GGTGTCTAATGGATGTTACCAGNTGCACCATTTGGATTTGATGCCCGAAGAGTAATTGCT  GCAATAATTAGATTATAGCCGAAAGAATACCTAAG</p>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_005536 unedited  CCGCGGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTATCAATTTAAAGTTTTA  TTCATGATCGTCTTATTAATAAATTTAATTGCAAAAACAACCTGTCTTAGAATACAGT  ATCAGATGTTTTAAGTACATGTGATCAACAGTACAATAATTATAGCAGTCAAACCTTAG  TATCACACATACTTAATATATTAGATATACACAATAATAAAATCACTCCCTACCTTGAAA  ACTTTACAGAAGCATTTTTAATTTTACAACACAAGCTCAAACGAACTACAATAAGTCT  AGTAGTCTGTTTACGTGCCAAGGATAAGGCTGAACAATAAATTAACCTTTAAAAATGT  CTATGAACAAGTACAATTTCTTTTGGAGTTCTGCAGAGCAATGACCACTAAGAAATATT  TTTAAAGGCTGAACAGAAATCCAGCGGCAATGAAGTTAATTAATAAAGAAGACTAAGAGAA  AAATAAACAGTTCAATATTAACAATACAGTATATTTGCCAGCACAATCAAATCAGTATAA  ACACCTTTAAACATGAATACTGAACCTAGTAAAATGTTATATTGTATCTAATATGTCA  GATATCTGATGAGAGTGCTTTTTATTATAGAAAATAGTTTCTTCTCTTACACAAGACTT  TAAAGCAAATCCAAACAGACAATTTAACTGTTTTGGAAAATGTATTCACTGCAGAAATGC  CCACAATAAGCCATGCTATCTGATGGTATGGTAATGTGAAATGGCATGGGTACGTGAATA  AAAAAAATTAAGTATGATAATTTACTTCAAACCTGAGCAAAGTACAGAAGCTGAGTTCAT  ACTTTAGTATCTATTGGACTAGGAATACTACATTAATATTCATTCTACAAGTTGTTTTT  TATTGCTAAATGTATGGGCCAGTGCTATATGACTGN</p>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_005536
<b>Insert Size:</b>	2360 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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\\_005536.2](#), [NP\\_005527.1](#)

**RefSeq Size:** 2349 bp

**RefSeq ORF:** 834 bp

**Locus ID:** 3612

**UniProt ID:** [P29218](#)

**Cytogenetics:** 8q21.13

**Domains:** inositol\_P

**Protein Families:** Druggable Genome

**Protein Pathways:** Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system

**Gene Summary:** This gene encodes an enzyme that dephosphorylates myo-inositol monophosphate to generate free myo-inositol, a precursor of phosphatidylinositol, and is therefore an important modulator of intracellular signal transduction via the production of the second messengers myo-inositol 1,4,5-trisphosphate and diacylglycerol. This enzyme can also use myo-inositol-1,3-diphosphate, myo-inositol-1,4-diphosphate, scyllo-inositol-phosphate, glucose-1-phosphate, glucose-6-phosphate, fructose-1-phosphate, beta-glycerophosphate, and 2'-AMP as substrates. This enzyme shows magnesium-dependent phosphatase activity and is inhibited by therapeutic concentrations of lithium. Inhibition of inositol monophosphate hydrolysis and subsequent depletion of inositol for phosphatidylinositol synthesis may explain the anti-manic and anti-depressive effects of lithium administered to treat bipolar disorder. Alternative splicing results in multiple transcript variants encoding distinct isoforms. A pseudogene of this gene is also present on chromosome 8q21.13. [provided by RefSeq, Dec 2014]

**Transcript Variant:** This variant (1) represents the predominant transcript and encodes isoform 1. **Sequence Note:** This RefSeq record was created from transcript and genomic sequence data because no quality transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.