OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC227552

IMPA1 (NM_001144879) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IMPA1 (NM_001144879) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IMPA1
Synonyms:	IMP; IMPA; MRT59
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

ORF Nucleotide Sequence:

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>RC227552 representing NM_001144879
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGATCCTTGGCAGGAATGCATGGATTATGCAGTAACTCTAGCAAGACAAGCTGGAGAGGTAGTTT
GTGAAGCTATAAAAAATGAAATGAATGTTATGCTGAAAAGTTCTCCAGTTGATTTGGTAACTGCTACGGA
CCAAAAAGTTGAAAAAATGCTTATCTCTTCCATAAAGGAAAAGTATCCATCTCACAGTTTCATTGGTGAA
GAATCTGTGGCAGCTGGGGAAAAAAGTATCTTAACCGACAACCCCACATGGATCATTGACCCTATTGATG
GAACAACTAACTTTGTACATAGATTTCCTTTTGTAGCTGTTTCAATTGGCTTTGCTGTAAATAAAAAGAT
AGAATTTGGAGTTGTGTACAGTTGTGTGGAAGGCAAGATGTACACTGCCAGAAAAGGAAAAGGTGCCTTT
TGTAATGGTCAAAAACTACAAGTTTCACAACAAGAAGGATCCGGAGTGTTGGAACAGCAGCTGTTAATAT
GTGCCTTGTGGCAACTGGCGGAGCAGATGCATATTATGAAATGGGAATTCACTGCTGGGATGTTGCAGGA
GCTGGCATTATTGTTACTGAAGCTGGTGGCGTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Protein Sequence:

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>RC227552 representing NM_001144879
Red=Cloning site Green=Tags(s)

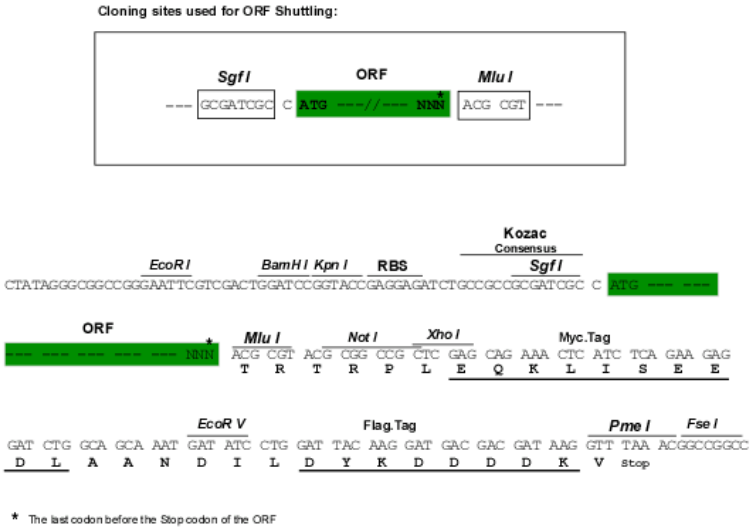
MADPWQECMDYAVTLARQAGEVVCEAIKNEMNVMLKSSPVDLVTATDQKVEKMLISSIKEKYPSHSFIGE
ESVAAGEKSILTDNPTWIIDPIDGTTNFVHRFPFVAVSIGFAVNKKIEFGVVYSCVEGKMYTARKGKGAF
CNGQKLQVSQQEGSGVLEQQLLICALWQLAEQMHIMKWEFTAGMLQELALLLLKLVAC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

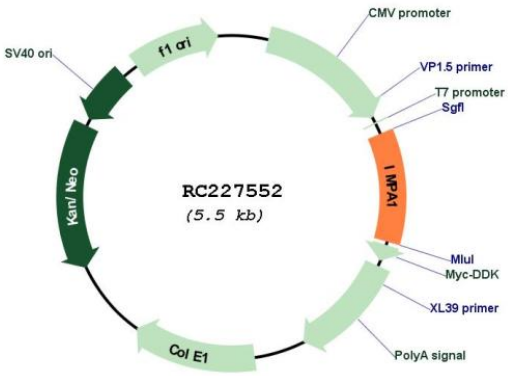
Restriction Sites: SgfI-MluI

View online »

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001144879
ORF Size:	594 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_001144879.1, NP_001138351.1
RefSeq ORF:	597 bp
Locus ID:	3612
UniProt ID:	P29218
Cytogenetics:	8q21.13
Protein Families:	Druggable Genome
Protein Pathways:	Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system
MW:	21.8 kDa

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 myoinositol 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 hydroylosis 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]