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 SC325787

IMPA1 (NM_001144878) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IMPA1 (NM_001144878) Human Untagged Clone
Tag:	Tag Free
Symbol:	IMPA1
Synonyms:	IMP; IMPA; MRT59
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC325787 representing NM_001144878. Blue=Insert sequence Red=Cloning site Green=Tag(s) GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC ATGGGGCAGCGCCCAGGTCCTGTGCTGCCCGCAGTCGCGGTGCTGGGACAGGTGGCAAAAAGGAAGGTG GCCTGGCTCCTACGCTGGAAGGCTGTGACCAGGACAGAAACAGCAGGAAACAGTTCAGGTGTTTATGGC TTTGGGAAAATGAAAATATTTGTCAAATATTTTCAGAAGATGGCTGATCCTTGGCAGGAATGCATGGAT TATGCAGTAACTCTAGCAAGACAAGCTGGAGAGGTAGTTTGTGAAGCTATAAAAAATGAAATGAATGTT ATGCTGAAAAGTTCTCCAGTTGATTTGGTAACTGCTACGGACCAAAAAGTTGAAAAAATGCTTATCTCT TCCATAAAGGAAAAGTATCCATCTCACAGTTTCATTGGTGAAGAATCTGTGGCAGCTGGGGAAAAAAGT ATCTTAACCGACAACCCCACATGGATCATTGACCCTATTGATGGAACAACTAACTTTGTACATAGATTT CCTTTTGTAGCTGTTTCAATTGGCTTTGCTGTAAATAAAAAGATAGAATTTGGAGTTGTGTACAGTTGT GTGGAAGGCAAGATGTACACTGCCAGAAAAGGAAAAGGTGCCTTTTGTAATGGTCAAAAACTACAAGTT TCACAACAAGAAGATATTACCAAATCTCTCTTGGTGACTGAGTTGGGCTCTTCCAGAACACCAGAGACT GTGAGAATGGTTCTTTCTAATATGGAAAAGCTTTTTTGCATTCCTGTTCATGGGATCCGGAGTGTTGGA ACAGCAGCTGTTAATATGTGCCTTGTGGCAACTGGCGGAGCAGATGCATATTATGAAATGGGAATTCAC TGCTGGGATGTTGCAGGAGCTGGCATTATTGTTACTGAAGCTGGTGGCGTGCTAATGGATGTTACAGGT GGACCATTTGATTTGATGTCACGAAGAGTAATTGCTGCAAATAATAGAATATTAGCAGAAAGGATAGCT AAAGAAATTCAGGTTATACCTTTGCAACGAGACGACGAAGATTAA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
Restriction Sites:	SgfI-MluI
ACCN:	NM_001144878
Insert Size:	1011 bp

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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).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA
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_001144878.1
RefSeq Size:	3597 bp
RefSeq ORF:	1011 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:	36.7 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]
Transcript Variant: This variant (2) contains an additional in-frame coding exon compared to transcript variant 1, resulting in an isoform (2) with a longer and a novel N-terminus compared to 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.