

## Product datasheet for PH302784

### IMPA1 (NM\_005536) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	IMPA1 MS Standard C13 and N15-labeled recombinant protein (NP_005527)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC202784
Predicted MW:	30.2 kDa
Protein Sequence:	>RC202784 protein sequence Red=Cloning site Green=Tags(s)  MADPWQECMDYAVTLARQAGEVVC EAIKNEMNVM LKSSPVDLVTATDQKVEKMLISSIKEKYP SHSFIGE ESVAAGEKSILTDNPTWIIDPIDGTTNFVHRFPFVAVSIGFAVNKKIEFGVVYSCVEGKMYTARKGKGAF CNGQKLQVSQQEDITKSLLVTELGSSRTPETVRMVL SNMEKLF CIPVHGIRSVGTA AVNMCLVATGGADA YYEMGIHCWDVAGAGIIVTEAGGLMDVTGGPFDLMSRRVIAANNRILAERIAKEIQVIPLQRDDED  TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<a href="#">NP_005527</a>
RefSeq Size:	3396
RefSeq ORF:	831
Synonyms:	IMP; IMPA; MRT59
Locus ID:	3612
UniProt ID:	<a href="#">P29218</a> , <a href="#">A0A024R830</a>



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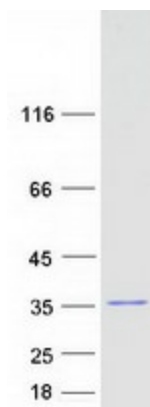
**Cytogenetics:** 8q21.13

**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 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]

**Protein Families:** Druggable Genome

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

### Product images:



Coomassie blue staining of purified IMPA1 protein (Cat# [TP302784]). The protein was produced from HEK293T cells transfected with IMPA1 cDNA clone (Cat# [RC202784]) using MegaTran 2.0 (Cat# [TT210002]).