

## Product datasheet for **TP302784**

### IMPA1 (NM\_005536) Human Recombinant Protein

#### Product data:

|                                       |   |
|---------------------------------------|---|
| Product Type:                         | Recombinant Proteins  |
| Description:                          | Recombinant protein of human inositol(myo)-1(or 4)-monophosphatase 1 (IMPA1), transcript variant 1, 20 µg |
| Species:                              | Human   |
| Expression Host:                      | HEK293T   |
| Expression cDNA Clone or AA Sequence: | >RC202784 protein sequence<br><b>Red</b> =Cloning site <b>Green</b> =Tags(s)                              |

MADPWQECMDYAVTLARQAGEVCEAIKNEMNVMKSSPVDLVTATDQKVEKMLISSIKEKYP SHSFIGE  
ESVAAGEKSILTDNPTWIIDPIDGTTNFVHRFPFVAVSIGFAVNKKIEFGVYSCVEGKMYTARKGKGAF  
CNGQKLQVSQQEDITKSLLVTELGSSRTPETVRMVLNMEKLFVIPVHGIRSVGTAAVNMCCLVATGGADA  
YYEMGIHCWDVAGAGIIVTEAGGVLM DVTGGPFDLMSRRVIAANNRILAERIAKEIQVIPLQRDDED

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

|                |  |
|----------------|--|
| Tag:           | C-Myc/DDK  |
| Predicted MW:  | 30 kDa   |
| Concentration: | >0.05 µg/µL as determined by microplate BCA method   |
| Purity:        | > 80% as determined by SDS-PAGE and Coomassie blue staining  |
| Buffer:        | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol   |
| Preparation:   | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.                                     |
| Note:          | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| Storage:       | Store at -80°C.  |
| Stability:     | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.        |
| RefSeq:        | <u><a href="#">NP_005527</a></u>   |
| Locus ID:      | 3612   |



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UniProt ID: [P29218](#)

RefSeq Size: 3396

Cytogenetics: 8q21.13

RefSeq ORF: 831

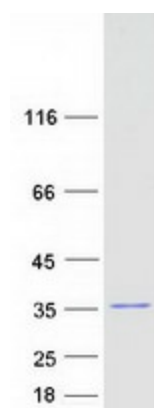
Synonyms: IMP; IMPA; MRT59

**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]).