

Recombinant Human IMPA1 Protein, His-tagged

Cat. No. IMPA1-720H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human IMPA1(Met1-Asp277), transcript variant 2, fused with His tag at C-terminal was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	1-277 a.a.
Description	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.
Form	20mM Phosphate buffer, 150mM NaCl, pH 7.25. Avoid repeated freeze-thaw cycles.

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Stable for at least 3 months from receipt of products under proper storage and handling conditions.

Molecular Mass 32.3 kDa

Endotoxin < 0.1 EU per g protein as determined by LAL test

Purity >95% as determined by SDS-PAGE and Coomassie blue staining

Concentration >50 ug/mL as determined by microplate BCA method

GENE INFORMATION

Gene Name IMPA1 inositol(myo)-1(or 4)-monophosphatase 1 [Homo sapiens]

Official Symbol IMPA1

Synonyms IMPA1; inositol(myo)-1(or 4)-monophosphatase 1; IMPA; inositol monophosphatase 1; IMP 1; IMPase 1; inositol-1(or 4)-monophosphatase 1; lithium-sensitive myo-inositol monophosphatase A1; IMP;

Gene ID 3612

mRNA Refseq NM_001144878

Protein Refseq NP_001138350

MIM 602064

UniProt ID P29218

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