

Product datasheet for **TP720208M**

IMPA1 (NM_001144878) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human inositol(myo)-1(or 4)-monophosphatase 1 (IMPA1), transcript variant 2
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	Met1-Asp277
Tag:	N-His
Predicted MW:	32.3 kDa
Concentration:	lot specific
Purity:	>95% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	Provided lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 150 mM NaCl
Endotoxin:	< 0.1 EU per µg protein as determined by LAL test
Storage:	Store at -80°C.
Stability:	Stable for at least 3 months from date of receipt under proper storage and handling conditions.
RefSeq:	NP_001138350
Locus ID:	3612
UniProt ID:	P29218 , A0A140VJL8
Cytogenetics:	8q21.13
Synonyms:	IMP; IMPA; MRT59



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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: