

Recombinant Full Length Human IMPA1 Protein, GST-tagged

Cat. No. IMPA1-5858HF Lot. No. (See product label)

SPECIFICATION

Product Overview Human IMPA1 full-length ORF (AAH08381, 1 a.a. - 277 a.a.) recombinant protein with GST-tag at N-terminal.

Species Human

Source In Vitro Cell Free System

ProteinLength 277 amino acids

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 myo-inositol 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]

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Molecular Mass	56.21 kDa
AA Sequence	MADPWQECMDYAVTLARQAGEVVCEAIKNEMNVMLKSSPVDLVTATDQKVEKMLIS SIKEKYP SHSFIGEESVAAGEKSILTDNPTWIIDPIDGTTNFVHRFPFVAVSIGFAVNKK IEFGVVYSCVEGKMYTARKGKGAFNGQKLQVSQQEDITKSLLVTELGSSRTPETV RMVLSNMEKLCIPVHGIRSVGTAAVNMCLVATGGADAYYEMGIHCWDVAGAGIIVT EAGGVLM DVTGGPFDLMSRRVIAANNRILAERIAKEIQVIPLQRDDED
Applications	Enzyme-linked Immunoabsorbent Assay Western Blot (Recombinant protein) Antibody Production Protein Array
Notes	Best use within three months from the date of receipt of this protein.
Storage	Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
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

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mRNA Refseq	NM_001144878
Protein Refseq	NP_001138350
MIM	602064
UniProt ID	P29218

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