Recombinant Human Inositol monophosphatase 1 (IMPA1)

Product Code	CSB-EP011694HU-B
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Uniprot No.	P29218
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	≥85% (SDS-PAGE)
Sequence	MADPWQECMD YAVTLARQAG EVVCEAIKNE MNVMLKSSPV DLVTATDQKV EKMLISSIKE KYPSHSFIGE ESVAAGEKSI LTDNPTWIID PIDGTTNFVH RFPFVAVSIG FAVNKKIEFG VVYSCVEGKM YTARKGKGAF CNGQKLQVSQ QEDITKSLLV TELGSSRTPE TVRMVLSNME KLFCIPVHGI RSVGTAAVNM CLVATGGADA YYEMGIHCWD VAGAGIIVTE AGGVLMDVTG GPFDLMSRRV IAANNRILAE RIAKEIQVIP LQRDDED
Source	E.coli
Target Names	IMPA1
Protein Names	Recommended name: Inositol monophosphatase 1 Short name= IMP 1 Short name= IMPase 1 EC= 3.1.3.25 Alternative name(s): Inositol-1(or 4)-monophosphatase 1 Lithium-sensitive myo-inositol monophosphatase A1
Expression Region	1-277
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag type will be determined during the manufacturing process.
Protein Length	Full length protein
Target Details	This gene encodes an enyzme 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 hydroylosis 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.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.