

## 32-2469: IMPA1 Recombinant Protein

**Alternative Name :** Inositol monophosphatase 1,IMP 1,IMPase 1,Inositol-1(or 4)-monophosphatase 1,Lithium-sensitive myo-inositol monophosphatase A1,IMPA1,IMPA,IMP.

### Description

Source : Escherichia Coli. IMPA1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 297 amino acids (1-277 a.a.) and having a molecular mass of 32.3kDa. The IMPA1 is purified by proprietary chromatographic techniques. Inositol monophosphatase1 (IMPA1) is responsible for the provision of inositol essential for synthesis of phosphatidylinositol and polyphosphoinositides. IMPA1 has a central role in the phosphatidylinositol signaling pathway by catalyzing the hydrolysis of inositol monophosphates. IMPA1 has been recognized as the pharmacological target for lithium action in the brain. The IMPA1 enzyme has a magnesium-dependent phosphatase activity and is inhibited by therapeutic concentrations of lithium. Inhibition of inositol monophosphate hydrolysis and ensuing depletion of inositol for phosphatidylinositol synthesis may perhaps explain the anti-manic and anti-depressive effects of lithium administered to treat bipolar disorder.

### Product Info

**Amount :** 20 µg  
**Purification :** Greater than 95.0% as determined by SDS-PAGE.  
**Content :** The IMPA1 solution (1 mg/ml) contains 20mM Tris-HCl Buffer (pH 8.0) and 10% Glycerol.  
**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.  
**Amino Acid :** MGSSHHHHHH SGLVPRGSH MADPWQECMD YAVTLARQAG EVVCEAIKNE MNVMLKSSPV  
 DLVTATDQKV EKMLISSIKE KYP SHSFIGE ESVAAGEKSI LTDNPTWIID PIDGTTNFVH  
 RFPFVAVSIG FAVNKKIEFG VVYSCVEGKM YTARKGKGAF CNGQKLQVSQ QEDITKSLLV  
 TELGSSRTPE TVRMVLSNME KLFCIPVHGI RSVGTA AVNM CLVATGGADA YYEMGIHCWD  
 VAGAGIIVTE AGGVLM DVTG GPFDLMSRRV IAANNRILAE RIAKEIQVIP LQRDDED.

