Product Data Sheet

Product Name:	IMPA1 Human
Cat. No.:	GP21827
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Inositol monophosphatase 1; IMP 1; IMPase 1; Inositol-1(or 4)-monophosphatase 1; Lithium-sensitive myo-inositol monophosphatase A1; IMPA1; IMPA; IMP.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH 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.		
Formulation	The IMPA1 solution (1mg/ml) contains 20mM Tris-HCl Buffer (pH 8.0) and 10% Glycerol.		

Introduction

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 hydroylosis 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.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer

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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.

Background

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.

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