

IMPA1 Human

Description: 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.

Catalog #: ENPS-013

For research use only.

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

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHH SSGLVPRGSH MADPWQECMD YAVTLARQAG
EVVCEAIKNE MNVMLKSSPV DLVTATDQKV EKMLISSIKE KYPHSFIGE ESVAAGEKSI
LTDNPTWIID PIDGTTNFVH RFPFVAVSIG FAVNKKIEFG VVYSCVEGKM YTARKGKGAF
CNGQKLQVSQ QEDITKSLLV TELGSSRTPE TVRMVLSNME KLFCIPVHGI RSVGTA AVNM
CLVATGGADA YY

Purity: Greater than 95.0% as determined by SDS-PAGE.

Formulation:

The IMPA1 solution (1 mg/ml) contains 20mM Tris-HCl Buffer (pH 8.0) and 10% Glycerol.

Stability:

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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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 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.

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