

IMPA1 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP9235b**Specification**

IMPA1 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P29218](#)**IMPA1 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 3612**Other Names**

Inositol monophosphatase 1, IMP 1, IMPase 1, D-galactose 1-phosphate phosphatase, Inositol-1(or 4)-monophosphatase 1, Lithium-sensitive myo-inositol monophosphatase A1, IMPA1, IMPA

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP9235b](/products/AP9235b) was selected from the C-term region of human IMPA1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IMPA1 Antibody (C-term) Blocking Peptide - Protein Information**Name** IMPA1**Synonyms** IMPA**Function**

Responsible for the provision of inositol required for synthesis of phosphatidylinositol and polyphosphoinositides and has been implicated as the pharmacological target for lithium action in brain. Has broad substrate specificity and can use myo-inositol monophosphates, myo-inositol 1,3-diphosphate, myo-inositol 1,4- diphosphate, scyllo-inositol-phosphate, D-galactose 1-phosphate, glucose-1-phosphate, glucose-6-phosphate, fructose-1-phosphate, beta-glycerophosphate, and 2'-AMP as substrates.

Cellular Location

Cytoplasm.

IMPA1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

IMPA1 Antibody (C-term) Blocking Peptide - Images**IMPA1 Antibody (C-term) Blocking Peptide - Background**

IMPA1 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.

IMPA1 Antibody (C-term) Blocking Peptide - References

Ohnishi,T., et.al., J. Biol. Chem. 282 (1), 637-646 (2007)Sjoholt,G., et.al, Mol. Psychiatry 9 (6), 621-629 (2004)