10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

IMPA1 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8723b

Specification

IMPA1 Antibody - Product Information

Application	**WB,E**
Primary Accession	P29218
Reactivity	**Human**
Predicted	**Human**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG1,κ**
Calculated MW	**30189**

IMPA1 Antibody - Additional Information

Gene ID 3612

Other Names
Inositol monophosphatase 1, IMP 1, IMPase 1, 3.1.3.25, D-galactose 1-phosphate phosphatase, 3.1.3.94, Inositol-1(or 4)-monophosphatase 1, Lithium-sensitive myo-inositol monophosphatase A1, IMPA1, IMPA

Target/Specificity
This IMPA1 antibody is generated from a mouse immunized with a recombinant protein from the human region of human IMPA1.

Dilution
WB~~1:1000-1:2000

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
IMPA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

IMPA1 Antibody - Protein Information

Name IMPA1 (HGNC:6050)

Synonyms IMPA

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Function Phosphatase involved in the dephosphorylation of myo-inositol monophosphates to generate myo-inositol (PubMed:17068342, PubMed:8718889, PubMed:9462881). Is also able to dephosphorylate scyllo-inositol-phosphate, myo-inositol 1,4-diphosphate, scyllo-inositol-1,3-diphosphate and scyllo-inositol-1,4-diphosphate (PubMed:17068342). Also dephosphorylates in vitro other sugar- phosphates including D-galactose-1-phosphate, glucose-1-phosphate, glucose-6-phosphate, fructose-1-phosphate, beta-glycerophosphate and 2'-AMP (PubMed:17068342, PubMed:8718889, PubMed:9462881). Responsible for the provision of inositol required for synthesis of phosphatidylinositols and polyphosphoinositides, and involved in maintaining normal brain function (PubMed:26416544, PubMed:8718889). Has been implicated as the pharmacological target for lithium (Li(+)) action in brain, which is used to treat bipolar affective disorder (PubMed:17068342). Is equally active with 1D-myo-inositol 1-phosphate, 1D-myo-inositol 3-phosphate and D-galactose 1-phosphate (PubMed:9462881).

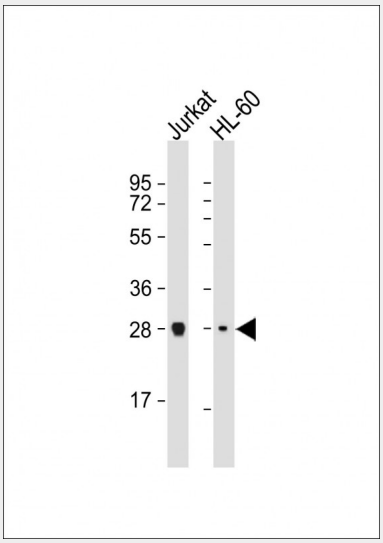
Cellular Location
Cytoplasm.

IMPA1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

IMPA1 Antibody - Images



All lanes : Anti-IMPA1 Antibody at 1:1000-1:2000 dilution Lane 1: Jurkat whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 30 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

IMPA1 Antibody - Background

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.

IMPA1 Antibody - References

McAllister G.,et al.Biochem. J. 284:749-754(1992).
Sjoeholt G.,et al.Genomics 45:113-122(1997).
Parthasarathy R.,et al.Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Nusbaum C.,et al.Nature 439:331-335(2006).