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IMPA1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8723b

Product Information

Application	WB, E
Primary Accession	P29218
Reactivity	Human, Mouse
Predicted	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,κ
Clone Names	2177CT172.34.52
Calculated MW	30189

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 E~~Use at an assay dependent concentration.
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.

Protein Information

Name	IMPA1 (HGNC:6050)
Synonyms	IMPA
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.

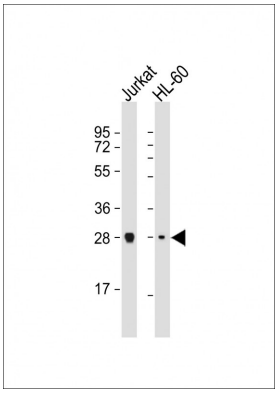
Background

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.

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).

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.