RD SYSTEMS a biotechne brand

Human/Mouse/Rat IMPA1/IMP1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 984603 Catalog Number: MAB98901

DESCRIPTION	
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human IMPA/IMPA1 Peptide in direct ELISAs. Detects human, mouse, and rat IMPA/IMPA1 in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 984603
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide containing human IMPA/IMPA1 Peptide Accession # P29218
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot 1 µg/mL See Below DATA Western Blot		Recommended Concentration	Sample
	Western Blot	1 µg/mL	See Below
	DATA		



Detection of Human. Mouse, and Rat IMPA1/IMP1 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line, NIH-3T3 mouse embryonic fibroblast cell line, and C6 rat glioma cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse/Rat IMPA1/IMP1 Moncolonal Antibody (Catalog # MAB98901) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for IMPA1/IMP1 at approximately 30 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
	*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 $^\circ$ C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
	 12 months from date of receipt, -20 to -70 °C as supplied.
	 1 month, 2 to 8 °C under sterile conditions after reconstitution.
	 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

IMPA-1/inositol(myo)-1(or 4)-monophosphatase 1 is a ubiquitous enzyme with broad specificity, which is responsible for the provision of inositol required for synthesis of phosphatidylinositol and polyphosphoinositides. IMPA-1 dephosphorylates myo-inositol monophosphatate to modulate intracellular signal transduction. IMPA-1 forms homodimers, and is abundantly expressed in brain. The magnesium-dependent phosphatase activity is inhibited by lithium, thereby depressing myo-inositol production, which may explain the anti-depressive and anti-manic effects of lithium therapy in bipolar disorder.

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