

LAT Monoclonal Antibody (LAT-01)

Catalog NumberMA1-19307

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Human
Host/Isotope	Mouse / IgG1	<div><div>Tested Applications</div><div>Dilution *</div><div>Flow Cytometry (Flow)</div><div>1-4 µg/mL</div><div>Immunoprecipitation (IP)</div><div>Assay-dependent</div><div>Western Blot (WB)</div><div>1-2 µg/mL</div></div>	
Class	Monoclonal		
Type	Antibody		
Clone	LAT-01		
Immunogen	Bacterially produced recombinant polypeptide corresponding to the entire cytoplasmic domain of human LAT	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Purification	Protein A		
Storage buffer	PBS, pH 7.4		
Contains	15mM sodium azide		
Storage Conditions	4° C, do not freeze		

Product specific information

This antibody will not cross-react with mouse.

Background/Target Information

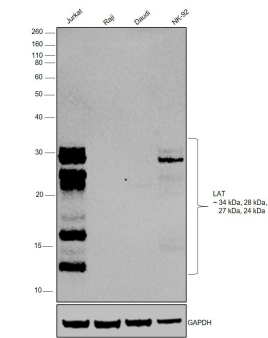
LAT (Linker for Activation of T cells) is a 36-38 kDa double-palmitoylated transmembrane adaptor protein expressed by T cells, pre-B cells, NK cells, mast cells and platelets. After immunoreceptor triggering, LAT becomes multiply tyrosine-phosphorylated by Syk-, Src-, or Tec-family kinases, providing docking sites for downstream signaling molecules. LAT is essential for TCR-dependent T cell- and FcεpsilonRI-dependent mast cell activation, as well as for maturation of early thymocytes. It is also involved in NK cell signaling and platelet activation.

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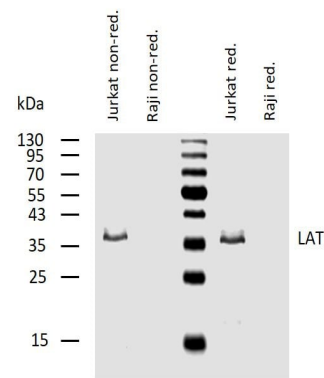
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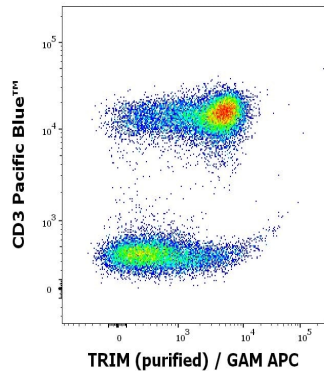
LAT Antibody (MA1-19307) in WB

Western blot was performed using Anti-LAT Monoclonal Antibody (LAT-01)(Product # MA1-19307) and a 34kDa, 28kDa, 27kDa and 24kDa band corresponding to LAT was observed across in T cell line, Jurkat, and Natural Killer cells, NK-92, but not in B-cells (Raji and Daudi). Membrane enriched extracts (30 µg lysate) of Jurkat (Lane 1), Raji (Lane 2), Daudi (Lane 3), NK-92 (Lane 4) were electrophoresed using NuPAGE™ 12% Bis-Tris Protein Gel (Product # NP0341BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1250) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177,1:8000) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).Linker for T cell activation (LAT) is preferentially expressed in higher levels in T-cells and Natural Killer cells for its development and proliferation. Additional proteolytically cleaved products, reported at several molecular weights >13kDa, are detected in Jurkat and NK-cells in comparison to the B-cell lines tested. [doi:10.3389/fimmu.2018.00115, 10.1042/BJ20121135]



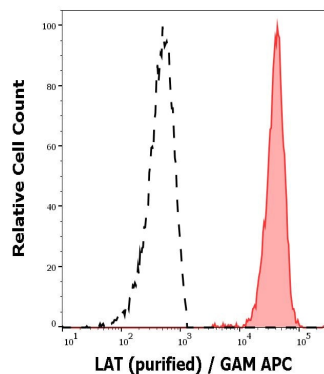
LAT Antibody (MA1-19307) in WB

Western blotting analysis of human LAT using mouse monoclonal antibody LAT-01 in lysates of Jurkat cells (positive) and Raji cells (negative control) under non-reducing and reducing conditions. Nitrocellulose membrane was probed with 2µg/mL of mouse anti-LAT Monoclonal antibody (Product # MA1-19307) followed by IRDye800-conjugated anti-mouse secondary antibody. A specific band was detected for LAT at approximately 38kDa.



LAT Antibody (MA1-19307) in Flow

Flow cytometry multicolor intracellular staining of human peripheral whole blood stained using anti-LAT (LAT-01) purified Monoclonal antibody (Product # MA1-19307) (concentration in sample 1 µg/mL, GAM APC) and anti-human CD3 (UCHT1) Pacific Blue™ using a dilution of 20 µL reagent/100 µL of peripheral whole blood.



LAT Antibody (MA1-19307) in Flow

Separation of human CD3 positive LAT positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (intracellular staining) of peripheral whole blood stained using anti-LAT (LAT-01) purified Monoclonal antibody (Product # MA1-19307) (concentration in sample 1 µg/mL, GAM APC).

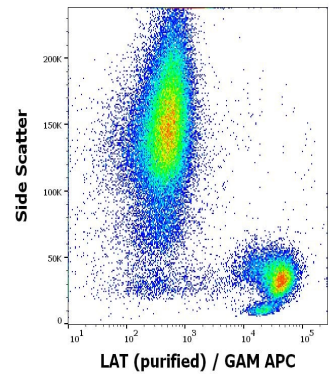
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LAT Antibody (MA1-19307) in Flow

Flow cytometry intracellular staining pattern of human peripheral whole blood using anti-LAT (LAT-01) purified Monoclonal antibody (Product # MA1-19307) (concentration in sample 1 µg/mL, GAM APC).



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