

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LAT in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 661002
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human LAT His30-Gln113 Accession # O43561
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human peripheral blood lymphocytes treated with Recombinant Human IL-4 (Catalog # 204-IL) and Human IFN-γ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-285-NA)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

LAT (Linker for activation of T cells; also pp36) is a 36-38 kDa type III (no signal sequence; extracellular N-terminus) transmembrane adaptor phosphoprotein. It is expressed on mast cells, NK cells, monocytes (but not macrophages), platelets and T cells. LAT is phosphorylated upon ligation of the TCR, GPVI, and Fc epsilon RI, and serves as an anchor for several SH2-domain containing signaling proteins, including PLCg1, SLP76 and Grb2. Human LAT is 262 amino acids (aa) in length. It contains a four aa extracellular segment with a 235 aa cytoplasmic domain (aa 28-262). Palmitoylation occurs on Cys26 and 29. There are 13 Ser/Thr phosphorylation sites plus five Tyr sites. Multiple potential splice variants are reported. There is an alternative start site 36 aa upstream of the standard site that may be accompanied by a deletion of aa 114-142. There is also a deletion of aa 88-97, and three substitutions: two aa for aa 215-262, 38 aa for aa 55-262, and 50 aa for aa 35-262. Over aa 30-113, human LAT shares 73% aa identity with mouse LAT.

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