



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

# LAT Antibody

#9166 Store at -20C

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IHC-P, FC-FP	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 36, 38	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #O43561	<b>Entrez-Gene Id:</b> 27040
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## Product Usage Information

### Application

Western Blotting  
Immunohistochemistry (Paraffin)  
Flow Cytometry (Fixed/Permeabilized)

### Dilution

1:1000  
1:100  
1:50 - 1:200

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

LAT Antibody detects endogenous levels of total LAT protein.

## Species predicted to react based on 100% sequence homology

Rat

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the central region of human LAT. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

LAT, a transmembrane adaptor protein expressed in T, NK, and mast cells, is an important mediator for T cell receptor (TCR) signaling (1). Upon TCR engagement, activated Zap-70 phosphorylates LAT at multiple conserved tyrosine residues within SH2 binding motifs, exposing these motifs as the docking sites for downstream signaling targets (2,3). The phosphorylation of LAT at Tyr171 and Tyr220 enables the binding of Grb2, Gads/SLP-76, PLCγ1, and PI3 kinase through their SH2 domain and translocates them to the membrane. This process eventually leads to activation of the corresponding signaling pathways (1-4).

## Background References

1. Wonerow, P. and Watson, S.P. (2001) *Oncogene* 20, 6273-83.
2. Zhang, W. et al. (1998) *Cell* 92, 83-92.
3. Paz, P. E. et al. (2001) *Biochem. J.* 356, 461-71.
4. Zhang, W. et al. (2000) *J. Biol. Chem.* 275, 23355-61.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

## Cross-Reactivity Key

**H:** Human **M:** Mouse

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