

Purified anti-LCK Phospho (Tyr505)

Catalog # / Size: 4098510 / 100 µg
4098505 / 25 µg

Clone: A17013A

Isotype: Mouse IgG1, κ

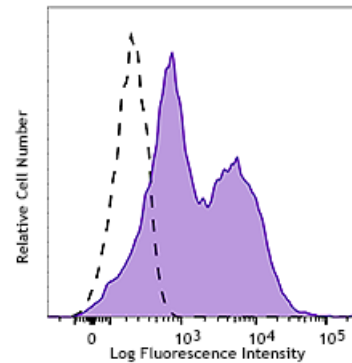
Immunogen: Human LCK peptide phosphorylated at Tyr 505.

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5 mg/ml



Human peripheral blood lymphocytes were treated with (filled histogram), or without (open histogram) Hydrogen Peroxide for 5 minutes, fixed with Fixation Buffer (Cat No. 420801), permeabilized with True-Phos™ Perm Buffer (Cat No. 425401), then intracellularly stained with purified anti-LCK Phospho (Tyr505) (clone A17013A), followed with mouse IgG1, κ PE.

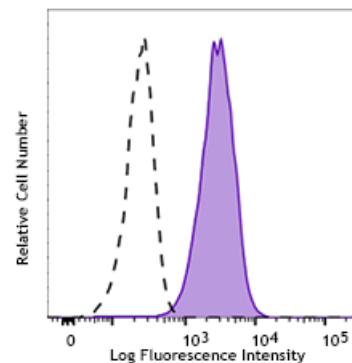
Applications:

Applications: Intracellular Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by intracellular flow cytometry using our True-Phos™ Perm Buffer in Cell Suspensions Protocol. For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: When tested for western blot, this clone produced a band that showed a ~1-3 kD mass shift compared to a pan HDAC1 antibody. This observation is consistent with a previous study of the HDAC1 Phospho (Ser406) site.

This clone recognizes zebrafish HDAC1 phosphorylated at Ser406².



Human T lymphoblastic leukemia cell line, Jurkat, was stimulated with (filled histogram) or without (open histogram) Hydrogen Peroxide for 5 minutes, fixed with Fixation Buffer (Cat No. 420801), permeabilized with True-Phos™ Perm Buffer (Cat No. 425401), and intracellularly stained with anti-PLCy1 Phospho (Tyr783) (clone A17025A) PE.

Application References:

Description: The Src family tyrosine kinase p56^{Lck} (LCK) is a non-receptor tyrosine kinase that is primarily expressed in T cells and NK cells. It plays a critical role in T cell selection and maturation within the thymus, and also in the function of mature T cells. LCK, which is constitutively bound to cytosolic domains of CD4 and CD8 surface receptors, plays an essential role in T cell receptor (TCR) signaling. Engagement of the TCR with peptide antigen-loaded MHC complex results in the recruitment of CD4- and CD8-bound LCK to the TCR/CD3 signaling complex. LCK then transphosphorylates TCR-gamma chains and CD3 subunits, thereby activating the TCR/CD3 signaling pathway and leading to the recruitment and subsequent phosphorylation of Zap70 by LCK. LCK also plays an important role in interleukin-2 signaling that regulates the T cell proliferative response. Phosphorylation of LCK by CSK at Tyrosine 505 negatively regulates LCK, and is proposed to generate a closed, inactive conformation of the protein.

**Antigen
References:**

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2. Moogk D, *et al.* 2016. *J Immunol.* 197:644.
3. Klammt C, *et al.* 2015. *Nat Immunol.* 16:961.
4. Cancer Genome Atlas Network. 2015. *Cell.* 161:1681.
5. Casas J, *et al.* 2014. *Nat Commun.* 5:5624
6. McNeill L, *et al.* 2007. *Immunity.* 27:425.
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8. Kabouridis PS. 2003. *Biochem J.* 371:907.