

# Phospho-STAT3 (Tyr705) Monoclonal Antibody (LUVNKLA), APC, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Published Species	Mouse, Human
Host/Isotype	Mouse / IgG2b, kappa
Recommended Isotype Control	Mouse IgG2b kappa Isotype Control (eBMG2b), APC, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	LUVNKLA
Conjugate	APC
Excitation/Emission Max	651/660 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2573282

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	8 Publications

## Product Specific Information

**Description:** This LUVNKLA monoclonal antibody recognizes human and mouse signal transducer and activator of transcription 3 (STAT3) when phosphorylated on tyrosine 705 (Y705). The STAT family represents seven transcription factors (STATs 1, 2, 3, 4, 5A, 5B, and 6) that are involved in many cellular processes including apoptosis, cell differentiation, and proliferation in a cell type- and cytokine-specific manner. STAT proteins are activated by ligand binding to cytokine receptors that associate with Janus kinase (JAK) family members.

Following their phosphorylation by JAKs, STAT proteins translocate to the nucleus where they bind to DNA and regulate transcription of specific genes in a cell type- and cytokine-specific manner. STAT3 is activated downstream of numerous cytokines including interferons, IL-5, IL-6, IL-10, and LIF. STAT3 is important for the differentiation of Th17 cells and mediates a variety of cellular processes including cell growth and survival. The importance of STAT3 is highlighted by both loss-of-function and gain-of-function mutations. Deletion of STAT3 in T cells results in decreased IL-6- and IL-2-mediated proliferation, while deletion of STAT3 in neutrophils and macrophages results in increased susceptibility to LPS-induced endotoxic shock and increased production of the pro-inflammatory cytokines IL-6 and TNF alpha. Hyper STAT3 activity is associated with poor prognosis of many different cancers.

**Applications Reported:** This LUVNKLA antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

**Applications Tested:** This LUVNKLA antibody has been pre-titrated and tested by intracellular staining followed by flow

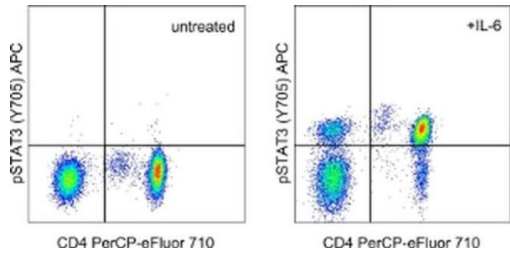
cytometric analysis of stimulated normal human peripheral blood cells. This can be used at 5  $\mu$ L (0.25  $\mu$ g) per test. A test is defined as the amount ( $\mu$ g) of antibody that will stain a cell sample in a final volume of 100  $\mu$ L. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

Staining Protocol: We recommend using Protocol C: Two-step protocol: Fixation/Methanol. Protocol A: Two-step protocol: intracellular (cytoplasmic) proteins and Protocol B: One-step protocol: intracellular (nuclear) proteins cannot be used. All Protocols can be found in the Flow Cytometry Protocols: "Staining Intracellular Antigens for Flow Cytometry Protocol" located in the Best Protocols Section under the Resources tab online.

Excitation: 633-647 nm; Emission: 660 nm; Laser: Red Laser.

Filtration: 0.2  $\mu$ m post-manufacturing filtered.

Product Images For Phospho-STAT3 (Tyr705) Monoclonal Antibody (LUVNKLA), APC, eBioscience™



**Phospho-STAT3 (Tyr705) Antibody (17-9033-42) in Flow**  
Intracellular staining of untreated (left) or 15-minute IL-6-treated (right) normal human peripheral blood cells with Anti-Human CD4 PerCP-eFluor® 710 (Product # 46-0047-42) and Anti-Human/Mouse phospho-STAT3 (Y705) APC. Cells in the lymphocyte gate were used for analysis. Cells were stained using the Intracellular Fixation/Methanol protocol.

View more figures on thermofisher.com

8 References

Flow Cytometry (8)

<p><b>Cell reports</b></p> <p><b>JAK1 signaling in dendritic cells promotes peripheral tolerance in autoimmunity through PD-L1-mediated regulatory T cell induction.</b></p> <p>"17-9033-42 was used in Flow Cytometry to conclude that DC-intrinsic JAK1 promotes peripheral tolerance, suggesting potential unwarranted DC-mediated effects of Jakinibs in autoimmune diseases."</p> <p>Authors: Vogel A,Martin K,Soukup K,Halfmann A,Kerndl M,Brunner JS,Hofmann M,Oberbichler L,Korosec A,Kuttke M, Datler H,Kieler M,Musiejovsky L,Dohnal A,Sharif O,Schabbauer G</p>	<p><b>Year</b> 2022</p> <p><b>Species</b> Mouse</p> <p><b>Dilution</b> 1:100</p>
<p><b>Journal for immunotherapy of cancer</b></p> <p><b>Combinatorial immunotherapy of N-803 (IL-15 superagonist) and dinutuximab with ex vivo expanded natural killer cells significantly enhances in vitro cytotoxicity against GD2<sup>+</sup> pediatric solid tumors and in vivo survival of xenografted immunodeficient NSG mice.</b></p> <p>"Published figure using Phospho-STAT3 (Tyr705) monoclonal antibody (Product # 17-9033-42) in Flow Cytometry"</p> <p>Authors: Chu Y,Nayyar G,Jiang S,Rosenblum JM,Soon-Shiong P,Safrit JT, Lee DA,Cairo MS</p>	<p><b>Year</b> 2021</p>

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