

Pacific Blue anti-STAT4 Phospho (Tyr693) Antibody

Catalog# / Size	941209 / 25 tests 941210 / 100 tests
Clone	A19016A
Regulatory Status	RUO
Other Names	Signal Transducer and Activator Of Transcription 4, SLEB11, Signal Transducer and Activator of Transcription 4 Variant 3
Isotype	Mouse IgG1, κ
Description	The signal transducer and activator of transcription (STAT) family of transcription factors are DNA-binding proteins required for transcriptional regulation of several cellular and physiological processes in response to cytokine and growth factor stimulation. Inactive STAT proteins are present as cytosolic monomers. C-terminal tyrosine phosphorylation by upstream Janus kinases results in STAT dimerization, translocation to the nucleus, and increased affinity for response elements found in the regulatory promoter of STAT target genes.

In contrast to most other members of the STAT family, STAT4 expression is restricted to hematopoietic cells and responds to fewer cytokines, such as IL-12 and IL-2. STAT4, which requires phosphorylation at tyrosine 693 for activation, plays a pivotal role in the differentiation and proliferation of Th1 and Th17 cells, both of which are crucial effectors of chronic autoimmune disorders. In natural killer cells, STAT4 is required for normal development, maturation, and activation. Single nucleotide polymorphisms of STAT4 are implicated in the pathogenesis of systemic lupus erythematosus and rheumatoid arthritis, and are linked with increased risk of hepatocellular carcinoma.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Synthetic peptide corresponding to human STAT4 phosphorylated at tyrosine 693
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Pacific Blue™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
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 5 μL per million cells in 100 μL staining volume or 5 μL per 100 μL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.

[View full statement regarding label licenses](#)

Excitation Laser	Violet Laser (405 nm)
Additional Product Notes	For use of this antibody in intracellular flow cytometry (ICFC), we recommend fixation and permeabilization using True-Phos™ Perm Buffer (Cat. No. 425401).
RRID	AB_3720569 (BioLegend Cat. No. 941209) AB_3720569 (BioLegend Cat. No. 941210)

Antigen Details

Structure	STAT4 is a 748 amino acid protein with predicted molecular weight of 86 kD.
Distribution	Hematopoietic cells/Nucleocytoplasmic localization
Function	Transcription factor, cell signaling
Biology Area	Cell Biology, Signal Transduction, Transcription Factors
Antigen References	Trinchieri G, <i>et al.</i> 2003. <i>Nat. Rev. Immunol.</i> 3:133. Remmers EF, <i>et al.</i> 2007. <i>N. Engl J. Med.</i> 357:977. Mukasa R, <i>et al.</i> 2010. <i>Immunity.</i> 32:616 Rapp M, <i>et al.</i> 2017. <i>Sci. Immunol.</i> 2:3296.
Gene ID	6775

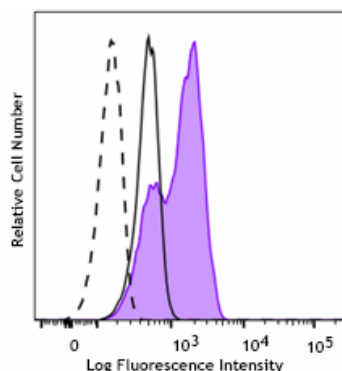
Related Protocols

- [Intracellular Staining With True-Phos™ Perm Buffer in Cell Suspensions Protocol](#)
- [Intracellular Staining With True-Phos™ Perm Buffer in Whole Blood](#)

Other Formats

Purified anti-STAT4 Phospho (Tyr693) Antibody, PE anti-STAT4 Phospho (Tyr693), Alexa Fluor® 647 anti-STAT4 Phospho (Tyr693), Pacific Blue anti-STAT4 Phospho (Tyr693), Alexa Fluor® 488 anti-STAT4 Phospho (Tyr693)

Product Data



PBMCs which were pre-treated overnight with Cell Activation Cocktail (1:2500) (Cat. No. 423301), were stimulated with (positive control, solid histogram) or without (negative control, open histogram) hIL-2 (100 ng/mL) (Cat. No. 791904) and IFNα2 (100 ng/mL) (Cat. No. 592704) for 30 min. Cells were then fixed and permeabilized using True Phos™ Perm Buffer (Cat No. 425401) and intracellularly stained with Pacific Blue™ anti-STAT4 Phospho (Tyr693) (clone A19016A), or Pacific Blue™ Mouse IgG1, κ Isotype Control (dashed histogram) (representative for both untreated and treated PBMC) (Cat. No. 400151).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form,

used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587