Phospho-STAT5 (Tyr694) Monoclonal Antibody (SRBCZX), PE, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Published Species	Mouse, Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	SRBCZX
Conjugate	PE
Excitation/Emission Max	565/576 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_2572671

Applications	Tested Dilution	Publications
Western Blot (WB)	-	1 Publication
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	16 Publications

Product Specific Information

Description: This SRBCZX monoclonal antibody recognizes signal transducer and activator of transcription 5 (STAT5) when phosphorylated on tyrosine 694. STAT proteins are activated by ligand binding to receptors, such as 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. In response to cytokines that signal through the common gamma chain such as IL-2, IL-7, and IL-15, STAT5 is phosphorylated on tyrosine 694 by JAK1 and JAK3. Cytokines such as IL-3, IL-5, and GM-CSF that signal via the common beta chain induce STAT5 phosphorylation on tyrosine 694 by JAK 2. Phosphorylation of STAT5 on tyrosine 694 is essential for STAT5 dimer formation, nuclear translocation, and DNA binding activity.

Specificity of this SRBCZX clone was determined by ELISA and flow cytometry.

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

Applications Tested: This SRBCZX 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 µL (0.25 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be

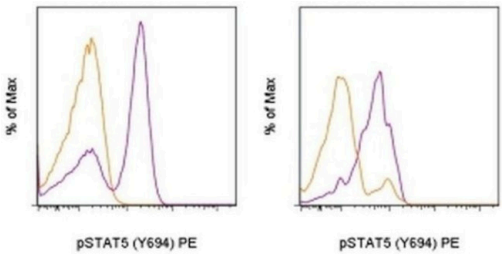
determined empirically but can range from 10^5 to 10^8 cells/test.

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: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Phospho-STAT5 (Tyr694) Monoclonal Antibody (SRBCZX), PE, eBioscience™



Phospho-STAT5 (Tyr694) Antibody (12-9010-42) in Flow
LEFT: Intracellular staining of untreated (orange histogram) or 15-minute IL-2-treated (purple histogram) human Th2-polarized CD4+ with Anti-Human/Mouse phospho-STAT5 (Y694) PE. Cells in the lymphocyte gate were used for analysis. RIGHT: Intracellular staining of untreated (orange histogram) or 15-minute GM-CSF-treated (purple histogram) mouse thioglycolate-elicited peritoneal exudate cells with Anti-Human/Mouse phospho-STAT5 (Y694) PE. CD11c+ cells in the large scatter population were used for analysis. In both panels, cells were stained using the Fixation/Methanol protocol.

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17 References

Western Blot (1)

Toxicology letters

Environmentally relevant concentrations of arsenite and monomethylarsonous acid inhibit IL-7/STAT5 cytokine signaling pathways in mouse CD3+CD4-CD8- double negative thymus cells.

"12-9010 was used in Western Blotting to suggest that arsenic at environmentally-relevant doses suppresses early T-cell development through inhibition of IL-7 signaling."

Authors: Xu H,Lauer FT,Liu KJ,Hudson LG,Burchiel SW

Year
2016

Species
Mouse

Flow Cytometry (16)

Journal of translational medicine

GM-CSF impairs erythropoiesis by disrupting erythroblastic island formation via macrophages.

"Published figure using Phospho-STAT5 (Tyr694) monoclonal antibody (Product # 12-9010-42) in Flow Cytometry"

Authors: Cao W,Fan W,Wang F,Zhang Y,Wu G,Shi X,Shi JX,Gao F,Yan M,Guo R,Li Y,Li W,Du C,Jiang Z

Year
2022

Species
Mouse

Journal for immunotherapy of cancer

Aged neutrophils form mitochondria-dependent vital NETs to promote breast cancer lung metastasis.

"12-9010-42 was used in Flow Cytometry to investigate the existence and biological function of a rarely delved subset of neutrophils, named as tumor-associated aged neutrophils (Naged, CXCR4+CD62Llow), involved in premetastatic niche formation during breast cancer metastasis."

Authors: Yang C,Wang Z,Li L,Zhang Z,Jin X,Wu P,Sun S,Pan J,Su K,Jia F,Zhang L,Wang H,Yu X,Shao X,Wang K,Qiu F,Yan J,Huang J

Year
2021

Species
Human
Mouse

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