Phospho-STAT5 (Tyr694) Monoclonal Antibody (SRBCZX), PE-eFluor™ 610, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Published Species	Rat
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE-eFluor™ 610, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	SRBCZX
Conjugate	PE-eFluor™ 610
Excitation/Emission Max	565/606 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_2574672

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.5 µg)/test	6 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 (0.5 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. PE-eFluor® 610 can be excited with laser lines from 488-561 nm and emits at 607 nm. We recommend using a 610/20 band pass filter (equivalent to PE-Texas Red®). Please make sure that your instrument is capable of detecting this fluorochome.

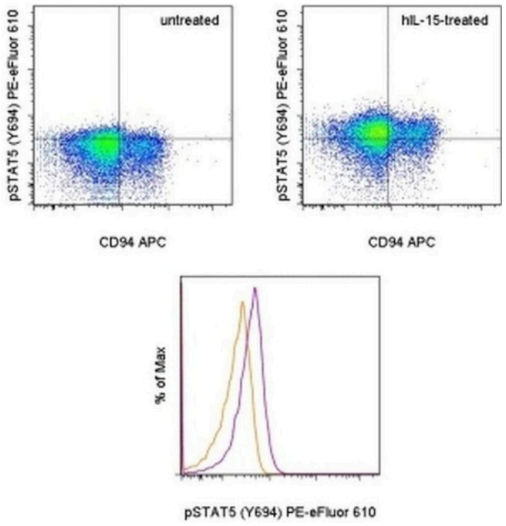
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488-561 nm; Emission: 607 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-eFluor™ 610, eBioscience™



Phospho-STAT5 (Tyr694) Antibody (61-9010-42) in Flow
TOP: Intracellular staining of untreated (left) or 15-minute IL-15-treated (right) normal human peripheral blood cells with Anti-Canine/Human CD94 APC (Product # 17-5094-42) and Anti-Human/Mouse phospho-STAT5 (Y694) PE-eFluor® 610. Cells in the lymphocyte gate were used for analysis. BOTTOM: Intracellular staining of untreated (orange histogram) or 15-minute IL-15-treated (purple histogram) normal human peripheral blood cells with Anti-Human/Mouse phospho-STAT5 (Y694) PE-eFluor® 610. CD94+ cells in the lymphocyte gate were used for analysis. In both panels, cells were stained using the Fixation /Methanol protocol.

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6 References

Flow Cytometry (6)

Journal of translational medicine

Year
2022

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

"Published figure using Phospho-STAT5 (Tyr694) monoclonal antibody (Product # 61-9010-42) 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

eLife

Year
2018

Receptor-mediated dimerization of JAK2 FERM domains is required for JAK2 activation.

"Published figure using Phospho-STAT5 (Tyr694) monoclonal antibody (Product # 61-9010-42) in Flow Cytometry"

Authors: Ferrao RD,Wallweber HJ,Lupardus PJ

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