

Anti-pStat5[Y694]-150Nd

Catalog: 3150005A

Package size: 50 tests

Storage: Store product at 4 °C. Do not freeze.

Cross-reactivity: Rat, Mouse, Human, Sheep

Clone: 47

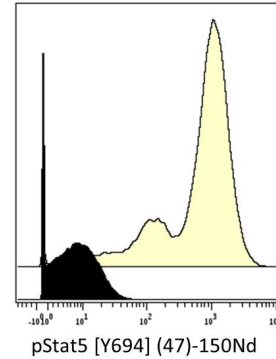
Isotype: Mouse IgG1

Formulation: Antibody stabilizer with 0.05% sodium azide

Technical Information

Validation: Each lot of conjugated antibody is quality control-tested by CyTOF[®] analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

Recommended usage: The suggested use is 1 µL for up to 3 × 10⁶ live cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human Jurkat T cells were incubated for 15 minutes in media alone (bottom) or with pervanadate (top). Cells were then fixed, permeabilized and stained with 150Nd-anti-pStat5 [Y694] (47).

Description

Members of the STAT (Signal Transducer and Activators of Transcription) family are important intracellular messengers of cytokines and growth factor signaling. Seven mammalian STATs have been identified: STAT1-4, 5a, 5b, and 6. STAT proteins are activated by tyrosine phosphorylation, which causes dimerization and translocation to the nucleus, where the STAT dimer acts as a transcription factor. STAT5a and STAT5b are encoded by two separate genes but 90% homologous at the amino acid level. JAK-mediated phosphorylation of Tyr694 on STAT5a/b occurs in response to many cytokines and growth factors including interferon-alpha, GM-CSF, IL-2 and IL-3. Non-JAK-mediated activation of STAT5 (i.e. by BCR-ABL in certain leukemias) has also been reported. Activated STAT5 promotes transcription of genes that mediate cell growth and survival.

References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81 (2009): 6,813–22.

Ornatsky, O. I., et al. Highly Multiparametric Analysis by Mass Cytometry. *Journal of Immunological Methods* 361 (2010): 1–20.

Bendall, S. C., et al. Single-Cell Mass Cytometry of Differential Immune and Drug Responses Across a Human Hematopoietic Continuum. *Science* (6 May 2011): 687–96.

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