

Anti-pStat5[Y694]-147Sm

Catalog: 3147012A

Package size: 50 tests

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

Cross-reactivity: Rat, Mouse, Human, Sheep

Clone: 47

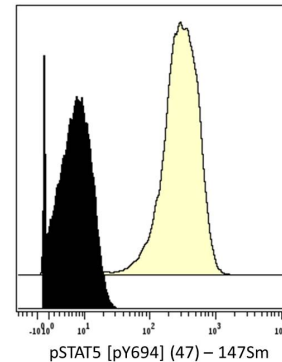
Isotype: Mouse IgG1

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 147Sm-anti-pSTAT5 [pY694] (47).

Description

Members of the STAT (signal transducers 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 (for example, 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* (2011): 687–96.

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