SONY

Product Data Sheet

Purified anti-STAT3 Phospho (Ser727)

Catalog # / Size: 4094505 / 25 µg
4094510 / 100 µg

Clone: A16089B

Isotype: Mouse IgG1, κ

Immunogen: Human Stat3 peptide phosphorylated at Ser 727. Complete Freund's adjuvant.

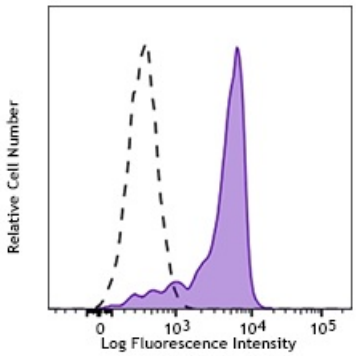
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Workshop Number: IV N816

Concentration: 0.5



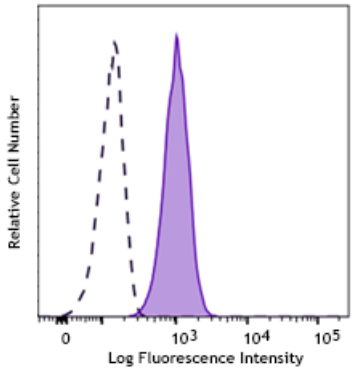
Human peripheral blood monocytes were treated with (filled histogram), or without (open histogram), Cell Activation Cocktail (Cat No. 423301) for 15 minutes, fixed with Fixation Buffer (Cat No. 420801), permeabilized with True-Phos™ Perm Buffer (Cat No. 425401), then intracellularly stained with Human TruStain FcX™ (Cat No. 422302) and purified anti-STAT3 Phospho (Ser727) (clone A16089B), followed by anti-mouse IgG PE.

Applications:

Applications: Intracellular Staining for Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.03 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: The STAT3 Phospho (Ser727) antibody recognizes the regulatory serine phosphorylation of human STAT3 protein.



NTERA2 Cells (low expressing target) were fixed and permeabilized using the Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803), and intracellularly stained with 0.03 µg of purified anti-COMT (clone A17180E) (filled histogram) or 0.03 µg/test of purified mouse IgG1, κ isotype control (Cat. No. 400102) (open histogram) followed by PE goat anti-mouse IgG (Cat. No. 405307).

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Application References:

1. Akira S, *et al.* 1994. *Cell*. 77:63.
2. Zhang X, *et al.* 1995. *Science* 267:1990.
3. Sanchez-Margalet V, *et al.* 2001. *Cell. Immunol.* 211:30.
4. Simon A, *et al.*

Description:

The STAT3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors and is required for murine fetal development. STAT3 is an 88 kD member of the STAT (signal transducer and activators of transcription) protein family that is phosphorylated in response to a cytokine receptor-associated kinase activity. Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation, and DNA binding. Transcriptional activation was reported to be regulated by phosphorylation at Ser727 through the MAPK or mTOR pathways.

STAT3 forms both homo- and heterotrimers and is involved in the activation of genes required for cell growth and apoptosis. STAT3 is also involved in gp130 signaling and binds to IL-6 response elements in various acute phase protein promoters. STAT3 is phosphorylated by signaling from IFNs, EGF, FGF, IL-5, HGF, LIF, and BMP2. STAT3 activity is inhibited by PIAS3 and GRIM-19 and can also be regulated by the Rac1 protein.

Antigen References:

1. Akira S, *et al.* 1994. *Cell*. 77:63.
2. Zhang X, *et al.* 1995. *Science* 267:1990.
3. Sanchez-Margalet V, *et al.* 2001. *Cell. Immunol.* 211:30.
4. Simon A, *et al.* 2000. *Science* 290:144.
5. Hoey T, *et al.* 1999. *Adv. Immunol.* 71:145.

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