

## PE anti-STAT3 Phospho (Tyr705) Antibody

<b>Catalog# / Size</b>	651003 / 25 tests 651004 / 100 tests
<b>Clone</b>	13A3-1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Signal transducer and activator of transcription 3, Acute-phase response factor, APRF, HIES
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	Tyrosine phosphorylation of STAT3 at Tyr705 occurs in response to LIF, IL-6, leptin, OSM, EGF, PDGF, and HGF. It plays a key role in cell growth and apoptosis through mediating expression of a variety of genes in response to the stimuli.

### Product Details

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<b>Verified Reactivity</b>	Human, Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	KLH conjugated modified synthetic peptide
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by intracellular flow cytometry using our <a href="#">True-Phos™ Perm Buffer in Whole Blood Protocol</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ l per million cells in 100 $\mu$ l staining volume or 5 $\mu$ l per 100 $\mu$ l of whole blood.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	The STAT3 Phospho (Tyr705) antibody recognizes the regulatory tyrosine phosphorylation of human STAT3 protein and has been shown to be useful for Western blotting.
<b>Product Citations</b>	1. Yang W, <i>et al.</i> 2020. Nat Commun. 3.553472222. <a href="#">PubMed</a> 2. Yousif AS, <i>et al.</i> 2020. Immunity. 54(2):235-246.e5. <a href="#">PubMed</a>
<b>RRID</b>	AB_2571891 (BioLegend Cat. No. 651003) AB_2571892 (BioLegend Cat. No. 651004)

### Antigen Details

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<b>Structure</b>	STAT3 is a 770 amino acid protein of 88 kD. It consists of a DNA binding domain, a SH2 domain, a regulatory tyrosine responsible for binding of SH2 domain, and a C-terminal transactivation domain.
<b>Distribution</b>	Ubiquitous.

<b>Function</b>	STAT3 is tyrosine phosphorylated by receptor kinases in response to a variety of cytokines and growth factors. It forms homo- or heterodimer with STAT1 when tyrosine is phosphorylated, and then translocates to nucleus, acting as a transcription regulator. It is also essential for the differentiation of TH17 cells, which is involved in autoimmune diseases.
<b>Cell Sources</b>	Cytoplasm. Translocate to nucleus in response to tyrosine phosphorylation.
<b>Cell Type</b>	Embryonic Stem Cells, Neural Stem Cells
<b>Biology Area</b>	Cell Biology, Neuroscience, Neuroscience Cell Markers, Signal Transduction, Stem Cells, Synaptic Biology, Transcription Factors
<b>Molecular Family</b>	Phospho-Proteins
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Akira S, <i>et al.</i> 1994. <i>Cell</i> 77:63.</li> <li>2. Zhang X, <i>et al.</i> 1995. <i>Science</i> 267:1990.</li> <li>3. Sanchez-Margalet V, <i>et al.</i> 2001. <i>Cell. Immunol.</i> 211:30.</li> <li>4. Simon A, <i>et al.</i> 2000. <i>Science</i> 290:144.</li> <li>5. Hoey T, <i>et al.</i> 1999. <i>Adv. Immunol.</i> 71:145.</li> </ol>
<b>Regulation</b>	The small GTPase Rac1 binds and regulates activity of STAT3.
<b>Gene ID</b>	<a href="#">6774</a>

## Related Protocols

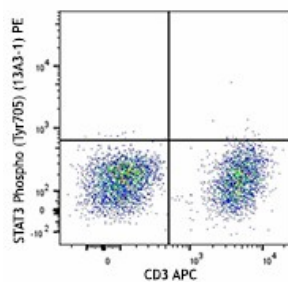
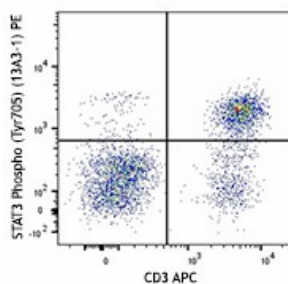
[Intracellular Staining With True-Phos™ Perm Buffer in Cell Suspensions Protocol](#)

[Intracellular Staining With True-Phos™ Perm Buffer in Whole Blood](#)

## Other Formats

Purified anti-STAT3 Phospho (Tyr705), PE anti-STAT3 Phospho (Tyr705), Alexa Fluor® 488 anti-STAT3 Phospho (Tyr705), Brilliant Violet 421™ anti-STAT3 Phospho (Tyr705), Alexa Fluor® 647 anti-STAT3 Phospho (Tyr705), Direct-Blot™ HRP anti-STAT3 Phospho (Tyr705), PE/Cyanine5 anti-STAT3 Phospho (Tyr705), FITC anti-STAT3 Phospho (Tyr705), PerCP/Cyanine5.5 anti-STAT3 Phospho (Tyr705)

## Product Data



Human whole blood was stimulated with (top), or without (bottom), IL-6 for 15 minutes, and then treated with RBC Lysis/Fixation Solution (10X), surface stained with CD3 APC, permeabilized with True-Phos™ Perm Buffer, and then intracellularly stained with STAT3 Phospho (Tyr705) (clone 13A3-1) PE.

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