

## PhosphoPair STAT3 (Tyr705) Antibody Set

<b>Catalog# / Size</b>	699952 / 1 kit
<b>Clone</b>	4G4B45; 13A3-1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Signal Transducer And Activator Of Transcription 3, Acute-Phase Response Factor, APRF

**Description** The STAT (Signal Transducer and Activator of Transcription) proteins represent a family of transcription factors that function as downstream effectors of growth factor and cytokine signaling cascades. STAT3 plays a central role in cell cycle progression, inhibition of apoptosis, and transformation. Phosphorylation of STAT3 at tyrosine 705 by JAK and receptor tyrosine kinases has been shown to increase STAT3 activation through multiple mechanisms, including increased homodimerization and concomitant translocation to the nucleus, as well as through increasing STAT3 affinity for response elements found in the regulatory promoters of its target genes. High levels of STAT3 activation have been described in several cancers and are of considerable interest for therapeutic intervention.

### Kit Contents

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Product	Application	Clone	Size	Reactivity	Isotype
<a href="#">Purified anti-STAT3 Antibody</a>	WB, ICFC, ICC, IP	4G4B45	25 µg	Human, Mouse	Mouse IgG1, κ
<a href="#">Purified anti-STAT3 Phospho (Tyr705) Antibody</a>	WB, ICC	13A3-1	25 µg	Human, Mouse	Mouse IgG1, κ

\* For detailed information about each specificity, please refer to the datasheets of the individual products.

### Product Details

<b>Verified Reactivity</b>	Human, Mouse
<b>Immunogen</b>	Please refer to individual product datasheets for immunogen information
<b>Formulation</b>	Phosphate-buffered solutions, pH 7.2, containing 0.09% sodium azide
<b>Preparation</b>	The antibodies were purified by affinity chromatography.
<b>Storage &amp; Handling</b>	The antibody solutions should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">WB - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of antibodies in this set is quality control tested by Western blotting. For Western blotting, the suggested uses of these reagents are as follows:</p> <p><b>Clone 4G4B45:</b> 0.25 - 1.0 µg/mL  <b>Clone 13A3-1:</b> 0.5 - 1.0 µg/mL</p> <p>It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>For recommended usage information for additional applications, please refer to the datasheet of the individual products.</p>

## Antigen Details

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<b>Structure</b>	STAT3 exists as two isoforms: STAT3 $\alpha$ is a 770 amino acid protein with a predicted molecular weight of ~88 kD, STAT3 $\beta$ is a 722 amino acid protein with a predicted molecular weight of ~83 kD.
<b>Distribution</b>	Ubiquitously expressed/Nucleus and cytosol
<b>Function</b>	Cell signaling, transcription factor
<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 and Martin-Romero C. 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 and Grusby MJ. 1999. <i>Adv. Immunol.</i> 71:145.</li></ol>
<b>Gene ID</b>	<a href="#">6774</a>

## Related Protocols

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[Western Blotting Protocol](#)

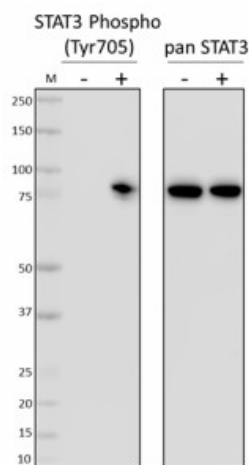
## Other Formats

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PhosphoPair STAT3 (Tyr705) Antibody Set

## Product Data

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Whole cell extracts (15  $\mu$ g protein) from serum starved A-431 cells untreated (-) or treated (+) with 100 ng/mL of EGF for 5 minutes were resolved on a 4-12% Bis-Tris gel and transferred to a nitrocellulose membrane. Membranes were probed with 0.5  $\mu$ g/mL (1:1000 dilution) of purified anti-STAT3 Phospho (Tyr705) antibody (clone 13A3-1) for 2 hours at room temperature. Proteins were visualized by chemiluminescence detection using HRP goat anti-mouse IgG antibody (Cat. No. 405306) at a 1:3000 dilution. Purified anti-STAT3 antibody (clone 4G4B45) was used as a pan STAT3 loading control at 1.0  $\mu$ g/mL (1:500 dilution). Lane M: Molecular weight marker.

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