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## Phospho-Stat3 (Ser727) (D4X3C) Rabbit mAb (PE Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> FC-FP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P40763	<b>Entrez-Gene Id:</b> 6774
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
<b>Specificity/Sensitivity</b>	Phospho-Stat3 (Ser727) (D4X3C) Rabbit mAb (PE Conjugate) recognizes endogenous levels of Stat3 protein only when phosphorylated at Ser727.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide corresponding to residues surrounding Ser727 of human Stat3 protein.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Stat3 (Ser727) (D4X3C) Rabbit mAb #34911.	
<b>Background</b>	The Stat3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors (1) and is required for murine fetal development (2). Research studies have shown that Stat3 is constitutively activated in a number of human tumors (3,4) and possesses oncogenic potential (5) and anti-apoptotic activities (3). Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation, and DNA binding (6,7). Transcriptional activation seems to be regulated by phosphorylation at Ser727 through the MAPK or mTOR pathways (8,9). Stat3 isoform expression appears to reflect biological function as the relative expression levels of Stat3 $\alpha$ (86 kDa) and Stat3 $\beta$ (79 kDa) depend on cell type, ligand exposure, or cell maturation stage (10). It is notable that Stat3 $\beta$ lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Heim, M.H. (2001) <i>J Recept Signal Transduct Res</i> 19, 75-120.</li> <li>2. Takeda, K. et al. (1997) <i>Proc Natl Acad Sci U S A</i> 94, 3801-4.</li> <li>3. Catlett-Falcone, R. et al. (1999) <i>Immunity</i> 10, 105-15.</li> <li>4. Garcia, R. and Jove, R. (1998) <i>J Biomed Sci</i> 5, 79-85.</li> <li>5. Bromberg, J.F. et al. (1999) <i>Cell</i> 98, 295-303.</li> <li>6. Darnell, J.E. et al. (1994) <i>Science</i> 264, 1415-21.</li> <li>7. Ihle, J.N. (1995) <i>Nature</i> 377, 591-4.</li> <li>8. Wen, Z. et al. (1995) <i>Cell</i> 82, 241-50.</li> <li>9. Yokogami, K. et al. (2000) <i>Curr Biol</i> 10, 47-50.</li> <li>10. Biethahn, S. et al. (1999) <i>Exp Hematol</i> 27, 885-94.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Applications Key</b>	<b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)	
<b>Cross-Reactivity Key</b>	<b>H:</b> Human	
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