

Phospho-Stat3 (Tyr705) (D3A7) XP[®] Rabbit mAb (PE Conjugate)

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

Applications: FC-FP	Reactivity: H M R Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P40763	Entrez-Gene Id: 6774
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	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.	
Specificity/Sensitivity	Phospho-Stat3 (Tyr705) (D3A7) XP [®] Rabbit mAb (PE Conjugate) detects endogenous levels of Stat3 only when phosphorylated at Tyr705. This antibody does not cross-react with phospho-EGFR or the corresponding phospho-tyrosines of other Stat proteins.	
Species predicted to react based on 100% sequence homology	Hamster, Bovine, Pig, Horse	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr705 of mouse Stat3 protein.	
Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Stat3 (Tyr705) (D3A7) XP [®] Rabbit mAb #9145.	
Background	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 α (86 kDa) and Stat3 β (79 kDa) depend on cell type, ligand exposure, or cell maturation stage (10). It is notable that Stat3 β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).	
Background References	<ol style="list-style-type: none"> 1. Heim, M.H. (2001) <i>J Recept Signal Transduct Res</i> 19, 75-120. 2. Takeda, K. et al. (1997) <i>Proc Natl Acad Sci U S A</i> 94, 3801-4. 3. Catlett-Falcone, R. et al. (1999) <i>Immunity</i> 10, 105-15. 4. Garcia, R. and Jove, R. (1998) <i>J Biomed Sci</i> 5, 79-85. 5. Bromberg, J.F. et al. (1999) <i>Cell</i> 98, 295-303. 6. Darnell, J.E. et al. (1994) <i>Science</i> 264, 1415-21. 7. Ihle, J.N. (1995) <i>Nature</i> 377, 591-4. 8. Wen, Z. et al. (1995) <i>Cell</i> 82, 241-50. 9. Yokogami, K. et al. (2000) <i>Curr Biol</i> 10, 47-50. 10. Biethahn, S. et al. (1999) <i>Exp Hematol</i> 27, 885-94. 	
Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)	
Cross-Reactivity Key	H: Human M: Mouse R: Rat Mk: Monkey	
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