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Phospho-Stat4 (Tyr693) (D2E4) Rabbit mAb (PE Conjugate)


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Applications: FC-FP	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q14765	Entrez-Gene Id: 6775
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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-Stat4 (Tyr693) (D2E4) Rabbit mAb (PE Conjugate) recognizes endogenous levels of Stat4 protein only when phosphorylated at Tyr693.	
Species predicted to react based on 100% sequence homology:	Mouse, Rat, Monkey, Pig	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr693 of human Stat4 protein.	
Product 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-Stat4 (Tyr693) (D2E4) Rabbit mAb #4134.	
Background	The Jak-Stat signaling pathway is utilized by a large number of cytokines, growth factors, and hormones (1). Receptor-mediated tyrosine phosphorylation of Jak family members triggers phosphorylation of Stat proteins, resulting in their nuclear translocation, binding to specific DNA elements, and subsequent activation of transcription. The remarkable range and specificity of responses regulated by the Stats is determined, in part, by the tissue-specific expression of different cytokine receptors, Jaks, and Stats, as well as by the combinatorial coupling of various Stat members to different receptors (2). Stat4 is predominantly expressed in the spleen, thymus, and testis and has been most extensively investigated as the mediator of IL-12 responses (3-8). Activation of Stat4 is associated with phosphorylation at Tyr693 (9).	
Background References	1. Darnell, J.E. et al. (1994) <i>Science</i> 264, 1415-1421. 2. Leonard, W.J. and O'Shea, J.J. (1998) <i>Annu. Rev. Immunol.</i> 16, 293-322. 3. Zhong, Z. et al. (1994) <i>Proc. Natl. Acad. Sci. USA</i> 91, 4806-4810. 4. Yamamoto, K. et al. (1994) <i>Mol. Cell Biol.</i> 14, 4342-4349. 5. Jacobson, N.G. et al. (1995) <i>J. Exp. Med.</i> 181, 1755-1762. 6. Bacon, C.M. et al. (1995) <i>Proc. Natl. Acad. Sci. USA</i> 92, 7307-7311. 7. Thierfelder, W.E. et al. (1996) <i>Nature</i> 382, 171-174. 8. Kaplan, M.H. et al. (1996) <i>Nature</i> 382, 174-177. 9. Visconti, R. et al. (2000) <i>Blood</i> 96, 1844-52.	

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 Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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