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Syk (4D10) Mouse mAb (Alexa Fluor® 488 Conjugate)

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

Applications: FC-FP	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Mouse IgG2a	UniProt ID: #P43405	Entrez-Gene Id: 6850
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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 antibody. Protect from light. Do not freeze.	
Specificity/Sensitivity	Syk (4D10) Mouse mAb (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total Syk protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Trp330 of human Syk protein.	
Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye 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 Syk (4D10) Mouse mAb #80460.	
Background	Syk is a protein tyrosine kinase that plays an important role in intracellular signal transduction in hematopoietic cells (1-3). Syk interacts with immunoreceptor tyrosine-based activation motifs (ITAMs) located in the cytoplasmic domains of immune receptors (4). It couples the activated immunoreceptors to downstream signaling events that mediate diverse cellular responses, including proliferation, differentiation, and phagocytosis (4). There is also evidence of a role for Syk in nonimmune cells and investigators have indicated that Syk is a potential tumor suppressor in human breast carcinomas (5). Tyr323 is a negative regulatory phosphorylation site within the SH2-kinase linker region in Syk. Phosphorylation at Tyr323 provides a direct binding site for the TKB domain of Cbl (6,7). Tyr352 of Syk is involved in the association of PLCγ1 (8). Tyr525 and Tyr526 are located in the activation loop of the Syk kinase domain; phosphorylation at Tyr525/526 of human Syk (equivalent to Tyr519/520 of mouse Syk) is essential for Syk function (9).	
Background References	<ol style="list-style-type: none"> Cheng, A.M. and Chan, A.C. (1997) <i>Curr Opin Immunol</i> 9, 528-33. Kurosaki, T. (1997) <i>Curr Opin Immunol</i> 9, 309-18. Chu, D.H. et al. (1998) <i>Immunol Rev</i> 165, 167-80. Turner, M. et al. (2000) <i>Immunol Today</i> 21, 148-54. Coopman, P.J. et al. (2000) <i>Nature</i> 406, 742-7. Deckert, M. et al. (1998) <i>J Biol Chem</i> 273, 8867-74. Rao, N. et al. (2001) <i>EMBO J</i> 20, 7085-95. Law, C.L. et al. (1996) <i>Mol Cell Biol</i> 16, 1305-15. Zhang, J. et al. (2000) <i>J Biol Chem</i> 275, 35442-7. 	
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	
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