Revision 1

#12081 Store at +4C

Phospho-Syk (Tyr525/526) (C87C1) Rabbit mAb (Alexa Fluor® 647 Conjugate)

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC, FC-FP	H	Endogenous	Rabbit IgG	#P43405	6850

Product Usage Information

Application	Dilution
Immunofluorescence (Immunocytochemistry)	1:50
Flow Cytometry (Fixed/Permeabilized)	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

Phospho-Syk (Tyr525/526) (C87C1) Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of Syk protein only when phosphorylated at Tyr525/526 of human Syk or Tyr519/520 of mouse Syk. This antibody also detects Syk protein when singly phosphorylated at Tyr526 of human Syk or Tyr520 of mouse Syk. This antibody does not cross-react with other tyrosine-phosphorylated protein tyrosine kinases.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr525/526 of human Syk protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct flow cytometry and immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Syk (Tyr525/526) (C87C1) Rabbit mAb #2710.

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

1. Cheng, A.M. and Chan, A.C. (1997) *Curr Opin Immunol* 9, 528-33.
2. Kurosaki, T. (1997) *Curr Opin Immunol* 9, 309-18.
3. Chu, D.H. et al. (1998) *Immunol Rev* 165, 167-80.
4. Turner, M. et al. (2000) *Immunol Today* 21, 148-54.
5. Coopman, P.J. et al. (2000) *Nature* 406, 742-7.
6. Deckert, M. et al. (1998) *J Biol Chem* 273, 8867-74.
7. Rao, N. et al. (2001) *EMBO J* 20, 7085-95.
8. Law, C.L. et al. (1996) *Mol Cell Biol* 16, 1305-15.
9. Zhang, J. et al. (2000) *J Biol Chem* 275, 35442-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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