Revision 5

Phospho-Syk (Tyr525/526) Antibody

#2711 Store at -20C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	72	Rabbit	#P43405	6850

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-Syk (Tyr525/526) Antibody detects endogenous levels of Syk protein only when phosphorylated at Tyr525/526 of human Syk (Tyr519/520 of mouse Syk). This antibody also cross-reacts with endogenous levels of Zap-70 when phosphorylated at Tyr493.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr525/526 of human Syk. Antibodies are purified by protein A and peptide affinity chromatography.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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