

#80460 Store at -20°C

## Syk (4D10) Mouse mAb



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

<b>Applications:</b> WB, IP, IHC-P, IF-IC, FC-FP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 72	<b>Source/Isotype:</b> Mouse IgG2a	<b>UniProt ID:</b> #P43405	<b>Entrez-Gene Id:</b> 6850
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### Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:2000
Immunofluorescence (Immunocytochemistry)	1:100
Flow Cytometry (Fixed/Permeabilized)	1:200

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #81721.

### Specificity / Sensitivity

Syk (4D10) Mouse mAb 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.

### 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)  
**IF-IC:** Immunofluorescence (Immunocytochemistry) **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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