

Phospho-Syk (Tyr323) Antibody

✓ 100 µl
(10 western blots)



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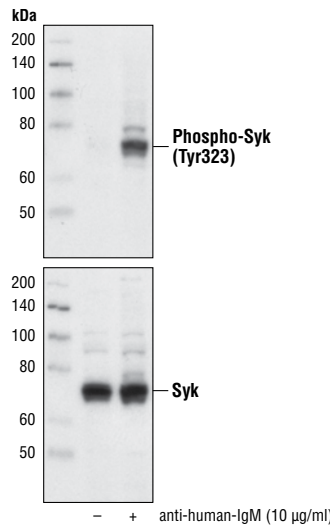
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, (M)	72 kDa	Rabbit**

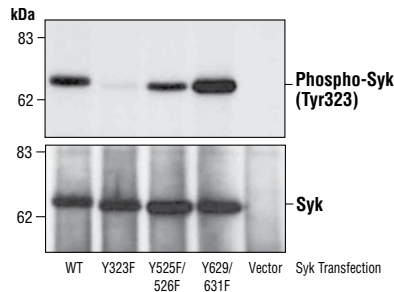
Background: Syk is a protein tyrosine kinase that plays an important role in intracellular signal transduction in hematopoietic cells (1-3). Syk interacts with immunoreceptor tyrosine-based activation motifs (ITAMs) located in the cytoplasmic domains of immune receptors (4). It couples the activated 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 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 of Tyr323 provides a direct binding site to the TKB domain of Cbl (6,7). Tyrosine 352 of Syk is involved in the association of PLC-γ1 (8). Tyrosines 525 and 526 are located in the activation loop of the Syk kinase domain, and phosphorylation of Tyr525/526 of human Syk (equivalent to the Tyr519/520 of mouse Syk) is essential for Syk function (9).

Specificity/Sensitivity: Phospho-Syk (Tyr323) Antibody detects endogenous levels of Syk only when phosphorylated at Tyr323. It does not cross-react with other tyrosine-phosphorylated members of the Syk/Zap-70 tyrosine kinase family.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr323 of human Syk or Tyr317 of mouse Syk. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Ramos cells, untreated or treated with anti-human-IgM (10 µg/ml), using Phospho-Syk (Tyr323) Antibody #2715 (upper) or Syk Antibody #2712 (lower).



Western blot analysis of extracts from 293T cells expressing recombinant wild-type or mutant Syk proteins, cotransfected with CD8, using Phospho-Syk (Tyr323) Antibody (upper) or Syk Antibody #2712 (lower). (Provided by Dr. Alagarsamy L. Reddi, laboratory of Dr. Hamid Band, Harvard University, Massachusetts.)

Entrez-Gene ID #6850
Swiss-Prot Acc. #P43405

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Cheng, A.M. and Chan, A.C. (1997) *Curr. Opin. Immunol.* 9, 528-533.
- (2) Kurosaki, T. et al. (1997) *Curr. Opin. Immunol.* 9, 309-318.
- (3) Chu, D.H. et al. (1998) *Immunol. Rev.* 165, 167-180.
- (4) Turner, M. et al. (2000) *Immunol. Today* 21, 148-154.
- (5) Coopman, P.J. et al. (2000) *Nature* 406, 742-747.
- (6) Decker, M. et al. (1998) *J. Biol. Chem.* 273, 8867-8874.
- (7) Rao, N. et al. (2001) *EMBO J.* 20, 7085-7095.
- (8) Law, C.L. et al. (1996) *Mol. Cell. Biol.* 16, 1305-1315.
- (9) Zhang, J. et al. (2000) *J. Biol. Chem.* 275, 35442-35447.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.