

Store at
-20°C

#39289

PhosphoPlus[®] Syk (Tyr525/526) Antibody Duet



Cell Signaling
TECHNOLOGY[®]

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Entrez-Gene ID #6850
UniProt ID #P43405

New 04/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
P-Syk (Y525/526) (C87C1) Rabbit mAb	2710	100 µl	72 kDa	Rabbit IgG
Syk (D3Z1E) XP [®] Rabbit mAb	13198	100 µl	72 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: PhosphoPlus[®] Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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).

Specificity/Sensitivity: Syk (D3Z1E) XP[®] Rabbit mAb recognizes endogenous levels of total Syk protein. Phospho-Syk (Tyr525/526) (C87C1) Rabbit mAb detects endogenous levels of Syk protein only when phosphorylated at Tyr525/526 of human Syk or Tyr519/520 of mouse Syk. It also detects Syk protein when singly phosphorylated at Tyr526 of human Syk or Tyr520 of mouse Syk. It does not cross-react with other tyrosine-phosphorylated protein tyrosine kinases.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn463 of human Syk protein and a phosphopeptide corresponding to residues surrounding Tyr525/526 of human Syk protein.

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.

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 product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: 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.