

Phospho-Src Family (Tyr416) Antibody

- Small 100 µl (10 western blots)
- Large 300 µl (30 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 W Endogenous | Species Cross-Reactivity* H, M, R, (C, X) | Molecular Wt. 60 kDa | Source Rabbit** |
|---------------------------------|--|-------------------------|--------------------|
|---------------------------------|--|-------------------------|--------------------|

Background: The Src family of protein tyrosine kinases (including Src, Lyn, Fyn, Yes, Lck, Blk, Hck, etc.) are important in the regulation of growth and differentiation of eukaryotic cells (1). Src activity is regulated by tyrosine phosphorylation at two sites with opposing effects. Phosphorylation of Tyr416 in the activation loop of the kinase domain upregulates enzyme activity. Phosphorylation of Tyr527 in the carboxy-terminal tail by Csk renders the enzyme less active (2).

Lyn is a member of the Src family that is predominantly expressed in hematopoietic cells (3). Lyn participates in signaling from multiple cell surface receptors such as the B cell antigen receptor (BCR) and CD40 (4).

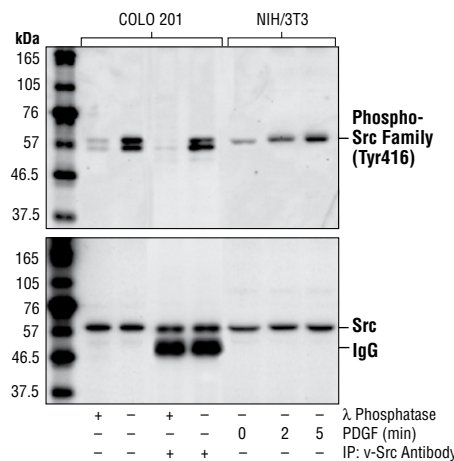
Lck is essential for T-lymphocyte activation and differentiation (5,6). Phosphorylation of the carboxy-terminal Tyr505 downregulates Lck activity, while phosphorylation at Tyr394 leads to an increase in Lck activity (7).

Specificity/Sensitivity: Phospho-Src Family (Tyr416) Antibody detects endogenous levels of Src only when phosphorylated at tyrosine 416. The antibody may cross-react with other Src family members (Lyn, Fyn, Lck, Yes and Hck) when phosphorylated at equivalent sites. It does not cross-react with Src phosphorylated at tyrosine 527. It may cross react with phosphorylated RTKs.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr416 of human Src. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Thomas, S.M. and Brugge, J.S. (1997) *Annu. Rev. Cell Dev. Biol.* 13, 513–609.
- (2) Hunter, T. (1987) *Cell* 49, 1–4.
- (3) Yamanshi, Y. et al. (1989) *Proc. Natl. Acad. Sci. USA* 86, 6538–6542.
- (4) Yamanashi, Y. et al. (1991) *Science* 251, 192–194.
- (5) Molina, T.J. et al. (1992) *Nature* 357, 161–164.
- (6) Straus, D.B. et al. (1992) *Cell* 70, 585–593.
- (7) Chow, L.M. et al. (1993) *Nature* 365, 156–160.



Western blot analysis of extracts from serum-starved COLO 201 cells, v-Src antibody immunoprecipitates from COLO 201 cells and PDGF-treated NIH/3T3 cells, treated with λ phosphatase as indicated, using Phospho-Src (Tyr416) Antibody (upper) or v-Src antibody (lower).

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

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.

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.