Phospho-Src Family (Tyr416) Antibody

Background:
The Src family of protein tyrosine kinases (including Src, Lyn, Fyn, Yes, Lck, 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 Tyr419 of human Src. Antibodies are purified by protein A and peptide affinity chromatography.

Background References: