



3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sia.com  
sigma-aldrich.com

## Product Information

### MONOCLONAL ANTI-p59<sup>fyn</sup>

#### CLONE 1S

Purified Mouse Immunoglobulin

Product Number **P 2992**

#### Product Description

Monoclonal Anti-p59<sup>fyn</sup> (Fyn) (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of splenocytes from BALB/c mice immunized with recombinant protein corresponding to amino acids 1-206 of mouse p59<sup>fyn</sup> and mouse myeloma p3-NS1-Ag4-1 cells. The antibody is purified by Protein G chromatography.

Monoclonal Anti-p59<sup>fyn</sup> specifically recognizes human, mouse and rat Fyn protein (~59 kDa). It has been used in immunoblotting, immunohistochemistry using acetone-fixed frozen or formalin-fixed paraffin embedded tissue sections, immunoprecipitation, and ELISA applications.

p59<sup>fyn</sup> (Fyn) is a membrane-associated, non-receptor protein tyrosine kinase and member of the Src family.<sup>1</sup> The Src family includes nine known members: Blk, c-Fgr, Fyn, Hck, Lck, Lyn, c-Src, ZAP-70, cYes and Yrk. Each encodes a cytoplasmic protein-tyrosine kinase (PTK) believed to be involved in signal transduction. The c-Src PTKs contain three domains (SH1, SH2 and SH3) that are found in many other signaling proteins. The activity of Src tyrosine kinases is tightly controlled by inhibitory autophosphorylation of a carboxyterminal tyrosine residue.<sup>2</sup> T cell signaling activates Lck and Fyn, leading to the phosphorylation of various substrates. Fyn is involved in T cell receptor signaling, regulation of brain function, and adhesion mediated signaling.<sup>1,3</sup>

Fyn is highly expressed in brain, suggesting a role in the sensory nervous network and in myelination at early stages of CNS formation.<sup>4</sup> The unique N-terminal domain of p59<sup>fyn</sup> interacts with CD3 and  $\alpha$  chains of the T cell receptor. p59<sup>fyn</sup> can bind other proteins through its SH2 and SH3 domains, which may act as substrates or regulators of Fyn activity.

#### Reagent

Monoclonal Anti-p59<sup>fyn</sup> is supplied as a solution in phosphate buffered saline, pH 7.4, with 0.08% sodium azide as a preservative.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

#### Storage/Stability

Store at -20 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in a frost-free freezer. The antibody is stable for at least 12 months when stored appropriately. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

A recommended working concentration of 1 to 5  $\mu$ g/ml is determined by immunohistochemistry using Anti-p59<sup>fyn</sup> antibody on acetone-fixed frozen sections. The recommended concentration for immunoprecipitation is 2  $\mu$ g/mg lysate. Human, mouse and rat T cell hybridomas, Jurkat cells or T cells in tonsil tissues may be used as positive controls.

Note: In order to obtain best results using different techniques and preparations we recommend determining optimal working concentration by titration.

## References

1. Resh, M.D., Fyn, a Src family tyrosine kinase. *Int. J. Biochem. Cell Biol.*, **30**, 1159-1162 (1998).
2. Schwartzberg, P.L., The many faces of Src: multiple functions of a prototypical tyrosine kinase. *Oncogene*, **17**, 1463-1468 (1998).
3. Ley, S.C., et al., Distinct intracellular localization of Lck and Fyn protein tyrosine kinases in human T lymphocytes. *J. Cell. Biol.*, **125**, 639-649 (1994).
4. Alland, L., et al., Dual myristylation and palmitoylation of Src family member p59fyn affects subcellular localization. *J. Biol. Chem.*, **269**, 16701-16705 (1994).

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