

## BACKGROUND

Src family kinases (SFKs) consist of eight non-receptor tyrosine kinases (Src, Fyn, Yes, Lck, Lyn, Hck, FGR and Blk) that interact with the intracellular domains of growth factor/cytokine receptors, GPCRs and integrins. Members of the Src kinase family have a very similar domain structure with a high degree of homology in the SH1 (catalytic), linker, SH2 (p-Tyr binding), SH3 (protein-protein interaction) and SH4 (membrane association) domains. c-Src, Fyn and Yes are ubiquitously expressed, although high levels of c-Src are found in platelets, neural tissue and osteoclasts. For c-Src, auto-phosphorylation of Tyr416 and dephosphorylation of Tyr527 is required to switch the kinase from the inactive closed formation to the active open formation.<sup>1</sup> c-Src can be inactivated by two kinases, c-Src kinase (CSK) and CSK homologous kinase (CHK), both of which phosphorylate Tyr527 of c-Src. The activity of the Src kinase family can also be regulated by phosphatases (e.g. SHP1), binding to adaptor proteins (e.g. Cbp) and proteasomal degradation. Src kinases are key upstream mediators of both the PI 3-K and MAPK signaling pathways, and have been shown to have important roles in cell proliferation, migration and survival.<sup>2</sup>

FGR is a Src-family member. It contains N-terminal sites for myristylation and palmitylation, a PTK domain, and SH2 and SH3 domains which are involved in mediating protein-protein interactions with phosphotyrosine-containing and proline-rich motifs, respectively. FGR protein localizes to plasma membrane ruffles, and functions as a negative regulator of cell migration and adhesion triggered by the beta-2 integrin signal transduction pathway.<sup>3</sup>

### References:

1. Homsi J et al., Expert Opin Ther Targets. 11:91-100, 2007.
2. Bradshaw, J.M.: Cell Signal 22:1175-84, 2010
3. Lowell, C.A. & Burton, G.: J. Leukoc. Biol. 65:313-20, 1999

## TECHNICAL INFORMATION

### Source:

FGR Antibody is a mouse monoclonal antibody raised against purified recombinant human FGR fragment expressed in *E. coli*.

### Specificity and Sensitivity:

This antibody detects endogenous FGR proteins without cross-reactivity with other family members.

**Storage Buffer:** PBS and 30% glycerol

### Storage:

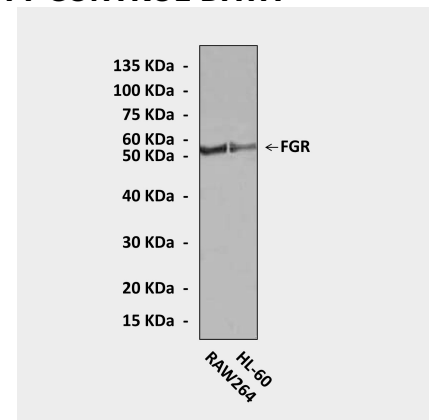
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	n/d
ICC	n/d
FACS	n/d

*\*Optimal dilutions must be determined by end user.*

## QUALITY CONTROL DATA



Western Blot detection of FGR proteins in Raw264.7 and HL-60 cell lysates using FGR Antibody.

