

## BACKGROUND

The focal adhesion PTK family consists of the focal adhesion kinase (FAK) and the Pyk2 kinase (also known as CAK- $\beta$ , RAFTK, and CADTK). Both FAK and Pyk2 have about 45% overall amino acid sequence identity, contain a central kinase domain flanked by large N- and C-terminal domains and lack Src homology 2 or 3 (SH2 and SH3) domains. One distinguishing but undefined difference between FAK and Pyk2, is that Pyk2 can be activated by stimuli that increase intracellular calcium levels in cells. They also exhibit distinct difference regard to their substrate specificity.<sup>1</sup> Pyk2 is expressed mainly in the central nervous system and in cells derived from hematopoietic lineages. FAK and Pyk2 have been proposed to facilitate linkages between integrin receptors and cytoskeletal proteins such as paxillin and Hic-5. In addition, FAK and Pyk2 may couple integrins to the activation of signaling pathways involving p130Cas, phosphatidylinositol 3'-kinase, and the JNK/mitogen-activated protein (MAP) kinase.<sup>2</sup> Pyk2 was demonstrated to enhance G-protein-linked signaling to ERK2.<sup>3</sup> The molecular pathways through which FAK and Pyk2 promote ERK2 activation also involve the activity of Src-family non-receptor PTKs.<sup>4</sup>

### References:

1. Avraham H et al.: Cell Signal. 12:123-33, 2000.
2. Schlaepfer DD et al.: Prog. Biophys. Mol. Biol. 71:435-78, 1999.
3. Lev S et al.: Nature, 376:737-745, 1995.
4. Sieg DJ et al.: EMBO J. 17:5933-47, 1998.

## TECHNICAL INFORMATION

### Source:

Pyk2 Antibody is a mouse monoclonal antibody raised against the recombinant human Pyk2 protein expressed in *E. coli*.

### Specificity and Sensitivity:

This affinity purified antibody detects endogenous levels of Pyk2 proteins in various cell lysates.

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

### Storage:

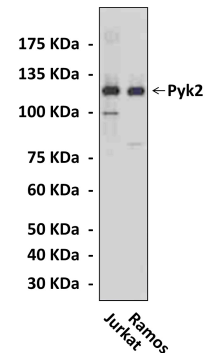
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

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

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

## QUALITY CONTROL DATA



Jurkat and Ramos cell lysates were subjected to Western Blot analysis using Pyk2 antibody.

