Revision 1

#3291 Store at -20C

Phospho-Pyk2 (Tyr402) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M	Endogenous	116	Rabbit	#Q14289	2185

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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.

Specificity / Sensitivity

Phospho-Pyk2 (Tyr402) Antibody detects endogenous levels of Pyk2 only when phosphorylated at tyrosine 402. This antibody may cross-react with other phospho-tyrosine containing proteins.

Species predicted to react based on 100% sequence homology:

Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr402 of human Pyk2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Protein tyrosine kinase Pyk2, also called CAKβ, RAFTK and CADTK, is a nonreceptor tyrosine kinase structurally related to focal adhesion kinase (FAK) (1-4). Pyk2 is predominantly expressed in cells derived from hematopoietic lineages and in the central nervous system. Pyk2 is one of the signaling mediators for the G-protein-coupled receptors and MAP kinase signaling pathway. It plays an important role in cell spreading and migration (5-7).
Pyk2 is tyrosine phosphorylated and activated upon ligation of TCR (8,9). Phosphorylated Tyr402 of Pyk2 is required for the phosphorylation of other tyrosines on Pyk2 and provides a binding site for Fyn SH2 in the T-cell activation (10).

Background References

1. Avraham, S. et al. (1995) *J. Biol. Chem.* 270, 27742-27751.
2. Lev, S. et al. (1995) *Nature* 376, 737-745.
3. Sasaki, H. et al. (1995) *J. Biol. Chem.* 270, 21206-21219.
4. Yu, H. et al. (1996) *J. Biol. Chem.* 271, 29993-29998.
5. Duong, L.T. et al. (2001) *J Biol Chem* 276, 7484-92.
6. Watson, J.M. et al. (2001) *J Biol Chem* 276, 3536-42.
7. Tang, H. et al. (2002) *J Biol Chem* 277, 5441-7.
8. Berg, N.N. and Ostergaard, H.L. (1997) *J Immunol* 159, 1753-7.
9. Ganju, R.K. et al. (1997) *J Exp Med* 185, 1055-63.
10. Katagiri, T. et al. (2000) *J Biol Chem* 275, 19645-52.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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