Revision 6

Pim-1 Antibody

Store at -20C

#2907

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	34, 44	Rabbit	#P11309	5292

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

Pim-1 Antibody recognizes endogenous levels of total Pim-1 protein. This antibody does not cross-react with other Pim proteins.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues at the carboxy terminus of human Pim-1. Antibodies were purified by protein A and peptide affinity chromatography.

Background

Pim proteins (Pim-1, Pim-2 and Pim-3) are oncogene-encoded serine/threonine kinases (1). Pim-1, a serine/threonine kinase highly expressed in hematopoietic cells, plays a critical role in the transduction of mitogenic signals and is rapidly induced by a variety of growth factors and cytokines (1-4). Pim-1 cooperates with c-Myc in lymphoid cell transformation and protects cells from growth factor withdrawal and genotoxic stress-induced apoptosis (5,6). Pim-1 also enhances the transcriptional activity of c-Myb through direct phosphorylation within the c-Myb DNA binding domain as well as phosphorylation of the transcriptional coactivator p100 (7,8). Hypermutations of the Pim-1 gene are found in B-cell diffuse large cell lymphomas (9). Phosphorylation of Pim-1 at Tyr218 by Etk occurs following IL-6 stimulation and correlates with an increase in Pim-1 activity (10). Various Pim substrates have been identified; Bad is phosphorylated by both Pim-1 and Pim-2 at Ser112 and this phosphorylation reverses Bad-induced cell apoptosis (11,12).
The corresponding pim-1 gene encodes a pair of proteins through use of different translation initiation sites. Both larger 44 kDa (Pim-1L) and smaller 33 kDa (Pim-1S) proteins are active kinases, but differ in stability (13).

Background References

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2. Selten, G. et al. (1986) *Cell* 46, 603-11.
3. Meeker, T.C. et al. (1987) *J Cell Biochem* 35, 105-12.
4. Dautry, F. et al. (1988) *J Biol Chem* 263, 17615-20.
5. Möröy, T. et al. (1993) *Proc Natl Acad Sci USA* 90, 10734-8.
6. Lilly, M. and Kraft, A. (1997) *Cancer Res* 57, 5348-55.
7. Leverson, J.D. et al. (1998) *Mol Cell* 2, 417-25.
8. Winn, L.M. et al. (2003) *Cell Cycle* 2, 258-62.
9. Pasqualucci, L. et al. (2001) *Nature* 412, 341-6.
10. Kim, O. et al. (2004) *Oncogene* 23, 1838-44.
11. Aho, T.L. et al. (2004) *FEBS Lett* 571, 43-9.
12. Yan, B. et al. (2003) *J Biol Chem* 278, 45358-67.
13. Saris, C.J. et al. (1991) *EMBO J* 10, 655-64.

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

W: Western Blotting

Cross-Reactivity Key

H: Human

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