PIM-1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Pim-1, Polyclonal Antibody
Full Product Name	Pim-1 (Phospho-Tyr309) Antibody
Product Gene Name	anti-Pim-1 antibody
Product Synonym Names	PIM-1; Proto-oncogene serine/threonine-protein kinase pim-1; EC 2.7.11.1
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatogramphy usi
Specificity	The antibody detects endogenous levels of Pim-1 only when phosphorylated at tyrosine 309.
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	45,412 Da
Chromosome Location	Chromosome: 6; NC_000006.11 (37137922..37143204). Location: 6p21.2
OMIM	164960
3D Structure	ModBase 3D Structure for P11309
Immunogen	Peptide sequence around phosphorylation site of tyrosine 309 (H-R-Y (p)-H-G) derived from Human Pim-1.
Product Categories/Family for anti-Pim-1 antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-Pim-1 antibody	Western Blot (WB)
Application Notes for anti-Pim-1 antibody	WB: 1:500~1:1000
Related Product Information for anti-Pim-1 antibody	Proto-oncogene with serine/threonine kinase activity involved in cell survival and cell proliferation and thus providing a selective advantage in tumorigenesis. Exerts its oncogenic activity through: the regulation of MYC transcriptional activity, the regulation of cell cycle progression and by phosphorylation and inhibition of proapoptotic proteins (BAD, MAP3K5, FOXO3). Phosphorylation of MYC leads to an increase of MYC protein stability and thereby an increase of transcriptional activity. The stabilization of MYC exerted by PIM1 might explain partly the strong synergism between these two oncogenes in tumorigenesis.
Product References and Citations for anti-Pim-1 antibody	Selten G., Cell 46:603-611 (1986). Saris C.J., EMBO J. 10:655-664 (1991). Maita H., Eur. J. Biochem. 267:5168-5178 (2000)

Other Notes	Small volumes of anti-Pim-1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Pim-1 purchase	MBS8585045 is an antibody targeting Pim-1. Also known as Pim-1 (Phospho-Tyr309) Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Pim-1. It may not necessarily be applicable to this product.

NCBI GI #	342307046
NCBI GeneID	5292
NCBI Accession #	NP_001230115.1
UniProt Primary Accession #	P11309
UniProt Secondary Accession #	Q38RT9; Q5T7H7; Q96RG3
UniProt Related Accession #	P11309
GenBank Nucleotide #	NM_001243186.1
NCBI Official Full Name	serine/threonine-protein kinase pim-1 isoform 1
NCBI Official Synonym Full Names	pim-1 oncogene
NCBI Official Symbol	PIM1
NCBI Official Synonym Symbols	PIM
UniProt Protein Name	Serine/threonine-protein kinase pim-1
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	PIM1
UniProt Entry Name	PIM1_HUMAN
NCBI Protein Information	serine/threonine-protein kinase pim-1; Oncogene PIM1; pim-1 kinase 44 kDa isoform; pim-1 oncogene (proviral integration site 1); proto-oncogene serine/threonine-protein kinase pim-1
NCBI Summary for Pim-1	The protein encoded by this gene belongs to the Ser/Thr protein kinase family, and PIM subfamily. This gene is expressed primarily in B-lymphoid and myeloid cell lines, and is overexpressed in hematopoietic malignancies and in prostate cancer. It plays a role in signal transduction in blood cells, contributing to both cell proliferation and survival, and thus provides a selective advantage in tumorigenesis. Both the human and orthologous mouse genes have been reported to encode two isoforms (with preferential cellular localization) resulting from the use of alternative in-frame translation initiation codons, the upstream non-AUG (CUG) and downstream AUG codons (PMIDs:16186805, 1825810).[provided by RefSeq, Aug 2011]

UniProt Comments for Pim-1	Pim1: a proto-oncogene serine/threonine kinase involved in cell survival and cell proliferation and thus providing a selective advantage in tumorigenesis. Exerts its oncogenic activity through: the regulation of MYC transcriptional activity, the regulation of cell cycle progression and by phosphorylation and inhibition of proapoptotic proteins (BAD, MAP3K5, FOXO3). Phosphorylation of MYC leads to an increase of MYC protein stability and thereby an increase of transcriptional activity. The stabilization of MYC exerced by PIM1 might explain partly the strong synergism between these two oncogenes in tumorigenesis. Mediates survival signaling through phosphorylation of BAD, which induces release of the anti-apoptotic protein Bcl- X(L)/BCL2L1. Phosphorylation of ASK1 an other proapoptotic protein, by PIM1, significantly decreases ASK1 kinase activity and inhibits MAP3K5-mediated phosphorylation of JNK and JNK/p38MAPK subsequently reducing caspase-3 activation and cell apoptosis. Stimulates cell cycle progression at the G1-S and G2-M transitions by phosphorylation of CDC25A and CDC25C. Phosphorylation of p21Cip1, a regulator of cell cycle progression at G1, results in the relocation of p21Cip1 to the cytoplasm and enhanced p21Cip1 protein stability. Promote cell cycle progression and tumorigenesis by down-regulating expression of a regulator of cell cycle progression, p27Kip1, at both transcriptional and post- translational levels. Phosphorylation of p27Kip1,induces 14-3-3- proteins binding, nuclear export and proteasome-dependent degradation. May affect the structure or silencing of chromatin by phosphorylating HP1 gamma/CBX3. Acts also as a regulator of homing and migration of bone marrow cells involving functional interaction with the CXCL12-CXCR4 signaling axis. Isoform 2 is isolated as a monomer whereas isoform 1 complexes with other proteins. Binds to RP9. Isoform 1, but not isoform 2, binds BMX. Isoform 2 interacts with p27Kip1 and FOXO3. Interacts with BAD. Interacts with PPP2CA; this interaction promotes dephosphorylation of PIM1, ubiquitination and proteasomal degradation. Interacts with HSP90, this interaction stabilizes PIM1 protein levels. Ubiquitinated form interacts with HSP70 and promotes its proteosomal degradation. Strongly induced in leukocytes by the JAK/STAT pathway in response to cytokines. Induced by different cellular stresses, heat shock and cytotoxic agents. Expressed primarily in cells of the hematopoietic and germline lineages. 2 isoforms of the human protein are produced by alternative initiation. Both isoforms are expressed in prostate cancer cell lines. Protein type: Protein kinase, CAMK; Oncoprotein; Protein kinase, Ser/Thr (non-receptor); Kinase, protein; EC 2.7.11.1; CAMK group; PIM family Chromosomal Location of Human Ortholog: 6p21.2 Cellular Component: cytoplasm; plasma membrane; nucleus Molecular Function: protein serine/threonine kinase activity; protein binding; manganese ion binding; transcription factor binding; ribosomal small subunit binding; ATP binding Biological Process: cell proliferation; apoptosis; negative regulation of transcription factor activity; multicellular organismal development; protein amino acid autophosphorylation; regulation of mitotic cell cycle; cell cycle; G1/S-specific positive regulation of cyclin-dependent protein kinase activity; hyaluronan metabolic process; protein amino acid phosphorylation; negative regulation of apoptosis
Research Articles on Pim-1	**1.** Reintroduction of human Pim1- cDNA into Pim1-/-mouse aortic endothelial cell significantly restored wildtype adhesive characteristics.
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