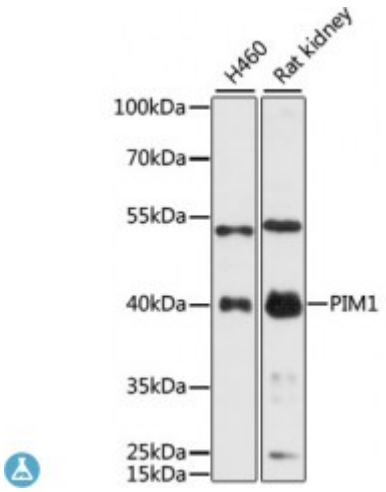
Anti-PIM1 Antibody



Description	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).
Model	STJ116142
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 1-313 of human PIM1 (NP_002639.1).
Gene ID	5292
Gene Symbol	PIM1
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Expressed primarily in cells of the hematopoietic and germline lineages, Isoform 1 and isoform 2 are both expressed in prostate cancer cell lines
Purification	Affinity purification
Note	For Research Use Only (RUO).

Protein Name	Serine/threonine-protein kinase pim-1
Molecular Weight	45.412 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:8986OMIM:164960Reactome:R-HSA-6785807
Alternative Names	Serine/threonine-protein kinase pim-1
Function	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, Mediates survival signaling through phosphorylation of BAD, which induces release of the anti-apoptotic protein Bcl-X(L)/BCL2L1, Phosphorylation of MAP3K5, an other proapoptotic protein, by PIM1, significantly decreases MAP3K5 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 CDKN1A, a regulator of cell cycle progression at G1, results in the relocation of CDKN1A to the cytoplasm and enhanced CDKN1A protein stability, Promote cell cycle progression and tumorigenesis by down-regulating expression of a regulator of cell cycle progression, CDKN1B, at both transcriptional and post-translational levels, Phosphorylation of CDKN1B,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,
Cellular Localization	Cytoplasm, Nucleus
Post-translational Modifications	Autophosphorylated on both serine/threonine and tyrosine residues, Phosphorylated, Interaction with PPP2CA promotes dephosphorylation,