

Product datasheet for MC209166

Pim1 (NM_008842) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pim1 (NM_008842) Mouse Untagged Clone
Tag: Tag Free
Symbol: Pim1
Synonyms: Pim-1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC209166 representing NM_008842
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGCTCCTGTCCAAGATCAACTCCCTGGCCACCTGCGCGCCGCGCCCTGCAACGACCTGCACGCCACCA
AGCTGGCGCCGGCAAAGAGAAGGAGCCCTGGAGTCGCAGTACCAGGTGGGCCCGCTGTTGGGCAGCGG
TGCTTCGGCTCGGTCTACTCTGGCATCCGCGTCGCCGACAACCTGCCGTTGGCCATTAAGCACGTGGAG
AAGGACCGGATTTCCGATTGGGGAGAATGCCCAATGGCACCCGAGTGCCCATGGAAGTGGTCTGTGA
AGAAGGTGAGCTCGGACTTCTCGGGCGTATTAGACTTCTGGACTGGTTCGAGAGGCCCGATAGTTTCGT
GCTGATCTGGAGAGGCCGAACCGGTGCAAGACCTCTTCGACTTTATCACCGAAGAGGAGCCCTACAG
GAGGACCTGGCCCGAGGATTCTTCTGGCAGGTGCTGGAGGCCGTGCGGCATTGCCACAACCTGCGGGGTTCC
TCCACCGGACATCAAGGACGAGAATCTTAATCGACCTGAGCCGCGGCGAAATCAAACATCGACTT
CGGGTGGGGGCGCTGCTCAAGGACACAGTCTACACGGACTTTGATGGGACCCGAGTGTACAGTCTCCCA
GAGTGGATTCGCTACCATCGCTACCACGGCAGGTGCGCAGCTGTCTGGTCCCTGGGATCCTGCTATG
ACATGGTCTGCGGAGATATCCGTTTGAGCACGATGAAGAGATCATCAAGGGCAAAGTGTCTTCAGGCA
AACTGTCTTTCAGAGTGCAGCACCTTATTAATGGTGCTGTCCTGAGACCATCAGATCGGCCCTCC
TTTGAAGAAATCCGAACCATCCATGGATGCAGGGTGACCTCCTGCCCCAGGCAGCTTCTGAGATCCATC
TGCACAGTCTGTACCGGGTCCAGCAAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_008842
Insert Size: 942 bp



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OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_008842.3](#), [NP_032868.2](#)

RefSeq Size: 1769 bp

RefSeq ORF: 942 bp

Locus ID: 18712

UniProt ID: [P06803](#)

Cytogenetics: 17 15.38 cM

Gene Summary:

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 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 (By similarity).[UniProtKB/Swiss-Prot Function]