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# Product datasheet for MC217731

## Pim2 (BC027376) Mouse Untagged Clone

### Product data:

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| **Product Type:** | Expression Plasmids |
| **Product Name:** | Pim2 (BC027376) Mouse Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | Pim2 |
| **Synonyms:** | DXCch3; Pim-2 |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Cell Selection:** | Neomycin |
| **Fully Sequenced ORF:** | >BC027376<br>Red=Cloning site Blue=ORF Green=Tags(s)<br><br>TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC<br>GCCGCGATCGCC<br><br>ATGTTGACCAAGCCTCTGCAGGGGCATCCTTCGCCCCCTGTGACCCCCACGCAGCCTCCAGGAGGCAAGG<br>ATCGGGCAGCTTTCGAGGCCGAATACCGACTTGGCCCCCTCCTGGGTAAGGGAGGCTTTGGCACCGTCTT<br>CGCGGGACACCGCGTCACGGATAGACGTCAGGTGGCCATCAAAGTAATCTCCCGGAACCGTGTGCTAGGC<br>TGGTCCACCGTGTCAGACTCAGTCACCTGCCCACTTGAGGTTGCGCTGCTGTGGAAGGTGGGTGAAGGCA<br>ATGGCCATCCGGGTGTGATACGCCTTCTTGACTGGTTCGAAACACCCGAAGGCTTCATGCTGGTCCTTGA<br>GCGGCCTATGCCTGCTCAGGATCTCTTCGACTATATCACAGAGAAGGGGCCGCTGGGTGAAAGCTGTAGC<br>CGCAGCTTCTTTACCCAAGTCGTGGCAGCTGTCCAGCACTGCCACGCCCGTGGAGTTGTCCATCGGGATA<br>TCAAGGATGAGAACATCCTGATCGACCTATGCCGGGGTTCCATTAAACTCATTGATTTTGGTTCCGGCGC<br>CCTGCTTCACGATGAGCCGTACACTGACTTTGATGGGACAAGAGTGTATAGCCCTCCAGAGTGGATCTCG<br>CGACACCAGTACCATGCCCTGCCAGCGACCGTCTGGTCACTAGGTGTCCTACTCTATGACATGGTCTGTG<br>GGGACATTCCCTTCGAGAGAGACCAGGAGATTCTGGAGGCTGAGCTGCACTTCCCTGCTCATGTCTCCCC<br>AGATTGCTGTGCCCTAATCCGCCGGTGCCTGGCCCCTAAACCCTGCTCCCGACCCTCACTGGAGGAGATT<br>CTGCTGGACCCCTGGATGCAATCACCAGCTGAAGAAAAGCCCATCAACTCCTCCAAAGGAAGCCCCACCC<br>CCTTGCCCTGGTCCCTGCTTCCCTAG<br><br>ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT<br>ACAAGGATGACGACGATAAGGTTTAA |
| **Restriction Sites:** | SgfI-MluI |
| **ACCN:** | BC027376 |
| **Insert Size:** | 936 bp |

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| **OTI Disclaimer:** | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). |
| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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:** | BC027376, AAH27376 |
| **RefSeq Size:** | 1974 bp |
| **RefSeq ORF:** | 935 bp |
| **Locus ID:** | 18715 |
| **Cytogenetics:** | X 3.55 cM |
| **Gene Summary:** | Proto-oncogene with serine/threonine kinase activity involved in cell survival and cell proliferation. Exerts its oncogenic activity through: the regulation of MYC transcriptional activity, the regulation of cell cycle progression, the regulation of cap-dependent protein translation and through survival signaling by phosphorylation of a pro-apoptotic protein, BAD. Phosphorylation of MYC leads to an increase of MYC protein stability and thereby an increase of transcriptional activity. The stabilization of MYC exerted by PIM2 might explain partly the strong synergism between these 2 oncogenes in tumorigenesis. Regulates cap-dependent protein translation in a mammalian target of rapamycin complex 1 (mTORC1)-independent manner and in parallel to the PI3K-Akt pathway. Mediates survival signaling through phosphorylation of BAD, which induces release of the anti-apoptotic protein Bcl-X(L)/BCL2L1. Promotes cell survival in response to a variety of proliferative signals via positive regulation of the I-kappa-B kinase/NF-kappa-B cascade; this process requires phosphorylation of MAP3K8/COT. Promotes growth factor-independent proliferation by phosphorylation of cell cycle factors such as CDKN1A and CDKN1B. Involved in the positive regulation of chondrocyte survival and autophagy in the epiphyseal growth plate.[UniProtKB/Swiss-Prot Function] |