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Product datasheet for MR222342

Pim2 (NM_138606) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pim2 (NM_138606) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pim2
Synonyms:	DXCch3; Pim-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR222342 representing NM_138606
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

CTGGCGCGCGCGACGAATCTTAACGCTGCGCCGTCTGCAGGCGCTTCCGGGCCGCCAGATTCCCTGCCTT
CCACCCTGGCGCCCCCCAGCCCTGGCTCTCCGGCCGCTCTGCCCCGGGCATCCACGCCCTGCGGGCTCAG
CGGATTCAGCGGGCTCAATATACGCAGCACCTCCTCCATGTTGACCAAGCCTCTGCAGGGGCATCCTTCG
CCCCCTGTGACCCCCACGCAGCCTCCAGGAGGCAAGGATCGGGCAGCTTTCGAGGCCGAATACCGACTTG
GCCCCCTCCTGGGTAAGGGAGGCTTTGGCACCGTCTTCGCGGGACACCGCGTCACGGATAGACGTCAGGT
GGCCATCAAAGTAATCTCCCGGAACCGTGTGCTAGGCTGGTCCACCGTGTCAGACTCAGTCACCTGCCCA
CTTGAGGTTGCGCTGCTGTGGAAGGTGGGTGAAGGCAATGGCCATCCGGGTGTGATACGCCTTCTTGACT
GGTTCGAAACACCCGAAGGCTTCATGCTGGTCCTTGAGCGGCCTATGCCTGCTCAGGATCTCTTCGACTA
TATCACAGAGAAGGGGCCGCTGGGTGAAAGCTGTAGCCGCAGCTTCTTTACCCAAGTCGTGGCAGCTGTC
CAGCACTGCCACGCCCGTGGAGTTGTCCATCGGGATATCAAGGATGAGAACATCCTGATCGACCTATGCC
GGGGTTCCATTAAACTCATTGATTTTGGTTCCGGCGCCCTGCTTCACGATGAGCCGTACACTGACTTTGA
TGGGACAAGAGTGTATAGCCCTCCAGAGTGGATCTCGCGACACCAGTACCATGCCCTGCCAGCGACCGTC
TGGTCACTAGGTGTCCTACTCTATGACATGGTCTGTGGGGACATTCCCTTCGAGAGAGACCAGGAGATTC
TGGAGGCTGAGCTGCACTTCCCTGCTCATGTCTCCCCAGATTGCTGTGCCCTAATCCGCCGGTGCCTGGC
CCCTAAACCCTGCTCCCGACCCTCACTGGAGGAGATTCTGCTGGACCCCTGGATGCAATCACCAGCTGAA
GAAAAGCCCATCAACTCCTCCAAAGGAAGCCCCACCCCCTTGCCCTGGTCCCTGCTTCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>MR222342 representing NM_138606
Red=Cloning site Green=Tags(s)

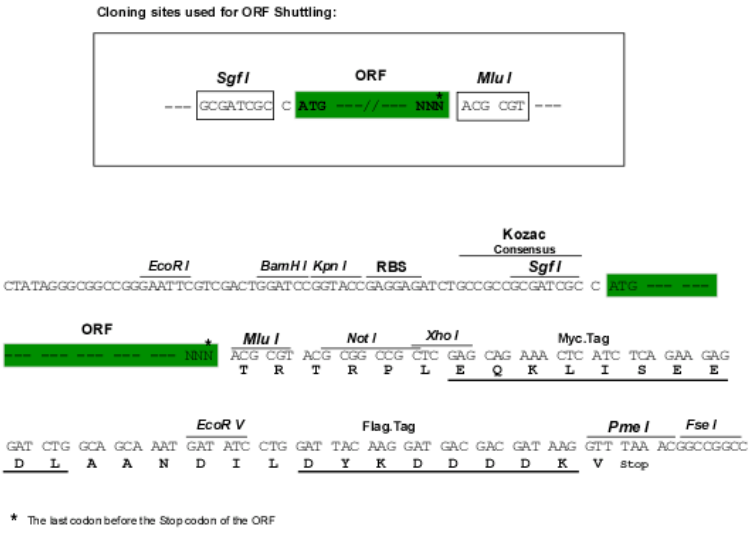
LARATNLNAAPSAGASGPPDSLPSTLAPPSPGSPAALPRASTPCGLSGFSGLNIRSTSSMLTKPLQGHPS
PPVTPTQPPGGKDRAAFEAEYRLGPLLGKGGFGTVFAGHRVTDRRQVAIKVISRNRVLGWSTVSDSVTCP
LEVALLWKVGEGNGHPGVIRLLDWFETPEGFMLVLERPMPAQDLFDYITEKGPLGESCSRSFFTQVVAAV
QHCHARGVVHRDIKDENILIDLCRGSIKLIDFGSGALLHDEPYTDFDGTRVYSPPEWISRHQYHALPATV
WSLGVLLYDMVCGDIPFERDQEILEAELHFPAHVSPDCCALIRRCLAPKPCSRPSLEEILLDPWMQSPAE
EKPINSSKGSPTPLPWSLLP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1323_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_138606

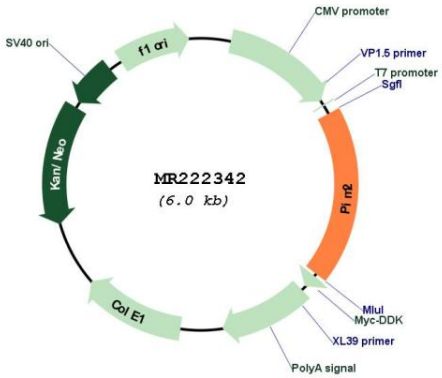
ORF Size: 1110 bp

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

OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_138606.2, NP_613072.1
RefSeq Size:	2054 bp
RefSeq ORF:	1113 bp
Locus ID:	18715
UniProt ID:	Q62070
Cytogenetics:	X 3.55 cM
MW:	40.5 kDa
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]

Product images:



Circular map for MR222342