

Product datasheet for MR225618

Pdgfrb (NM_008809) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pdgfrb (NM_008809) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Pdgfrb
Synonyms: AI528809; CD140b; Pdgfr; PDGFR-1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR225618 representing NM_008809
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGATCGCC

ATGGGGCTCCAGGAGTGATACCAGCTTAGTCCTCAGAGGCCAGTTGTTGCTGTCCGTGTTATGGCTCC
 TGGGACCCGAGACCTCCCGGGCCTAGTCATCACGCCCTGGGCCAGAGTTGTTCTCAACATCTCCAG
 CACCTTTGTTCTGACCTGCTCGGGCTCAGTCCGGTGATGTGGGAACAGATGTCCAGGTGCCCTGGCAA
 GAAGCGGCATGAATCAGGACGGCACCTTCTCCAGTGTGCTGACACTGACCAATGTACTGGGGAGACA
 CTGGGAATACTTTGTGTCTACAACAACCTCACTAGGGCCGAGCTCAGTGAGAGGAAGCGTATCTATAT
 CTTTGTGCCAGATCCCACCATGGGCTTCCCTCCATATGGACTCCGAGGACCTGTTCATTTTGTACGGAT
 GTCAGTACGACGACAATCCGTGCCGAGTGACAGACCCCCAGCTGGAGGTGACGCTACATGAGAAGAAAG
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 TCATCCATCAACGTCTCTGTGAATGCCGTGCAGACTGTGGTCCGCCAGGGCGAGAGCATCACCATCCGGT
 GCATTGTGATGGGCAATGATGTGGTGAACCTTCCAATGGACGTACCCCGCATGAAGAGTGGGCGGCTGGT
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 GAGCTGAGTGATTCGGGCACCTATACTTGCAACGTGTCAGTGAGTGTGAACGACCATGGCGATGAGAAAG
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 CCCGGTACGTGTGAGAACTGATCCTGGTACGTGTGAAGGTGTCAGAAGCGGGCTACTATACTATGCGAGC
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GTGAGCACACTGCGCCTGCGCCACGTGGATCAGCCACTGTCCGTACGCTGCATGCTGCAGAACTCCATGG
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 CCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225618 representing NM_008809
 Red=Cloning site Green=Tags(s)

MGLPGVIPALVLRGQLL SVLWLLGPQTSRGLVITPPGPEFVLNISSTFVLTCSGSAPVMWEQMSQVPWQ
 EAAMNQDGT FSSVLT LTNVTGGDTGEYFCVYNNSLGPEL SERKRIYIFVPDPTMGFLPMDEDLFIFVTD
 VTETTIPCRVTD PQLEVL HEKKVDIPLHVPYDHQRGFTGTFEDKTYICKTTIGDREVDSDTYVYVSLQV
 SSINVS VNAVQTVVRQGESITIRCIVMGNDV VNFQWTPRMSGRLEVPVTDYLFVGPVSRIGSILHIPTA
 ELSDSGTYTCNVS VSVNDHGDEKAINISVIENGYVRLLETLGDVEIAELHRSRTL RVVFEAYPMP SVLWL
 KDNRTLGD SGAGELV LSTRNMSETRYVSELILVRVKVSEAGYYTMR AFHEDDEVQLSFKLQVNPVVRVLE
 LSESHPANGEQTIRCGRGMPQPNVTWSTCRDLKRCPRKLSPTPLGNSSKEESQLETNVTFWEEDQEYEV
 VSTLRLRHVDQPLSVRCMLQNSMGGDSQEVTVVPHSLPFKVVVISAILALVVLTVISLIIILMLWQKPR
 YEIRWKVIESVSSDGHEYIYVDPVQLPYDSTWELPRDQLVGR TLGSGAFGQVVEATAHGLSHSQATMKV
 AVKMLKSTARSS EKQALMSELKIMSHLGPLN VVNLGACTKGGPIYIIIEYCRYGDLVDYLHRNKHTFL
 QRHSNKHCPPSAELYSNALPVGFS LPSHLNL TGESDGGYMDMSKDESIDYVPM LDMKGDIKYADIESPSY
 MAPYDNYVPSAPERTYRATLINDSPVLSYD L VGF SYQVANGMDFLASKNCVHRDLAARNVLI CEGKLVK
 ICFGLARDIMRDSNYISKGSTFLPKWMAPESIFNSLYTTLSDVWSFGILLWEIFTLGGTPYELPMND
 QFYNAIKRGYRMAQPAHASDEIYEIMQK WEEKFETRPPFSQLVLLERLLGEGYK KKYQQVDEEFLRSD
 HPAILRSQARFPGIHSLSPLDTSVLYTAVQPNESDNDYIIPLPDPKPDVADEGLPEGSPSLASSTLNE
 VNTSSTISCDSPLELQE EPQQAEP EAQLEQPQDSGCPGLAE AEDSFL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9009_b02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_008809

ORF Size: 3294 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.

RefSeq: [NM_008809.2](#), [NP_032835.2](#)

RefSeq Size: 5410 bp

RefSeq ORF: 3297 bp

Locus ID: 18596

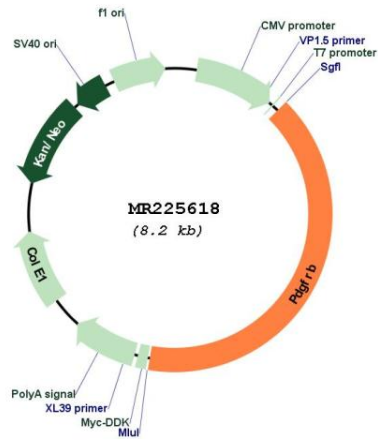
UniProt ID: [P05622](#)

Cytogenetics: 18 34.41 cM

MW: 123.2 kDa

Gene Summary: Tyrosine-protein kinase that acts as cell-surface receptor for homodimeric PDGFB and PDGFD and for heterodimers formed by PDGFA and PDGFB, and plays an essential role in the regulation of embryonic development, cell proliferation, survival, differentiation, chemotaxis and migration. Plays an essential role in blood vessel development by promoting proliferation, migration and recruitment of pericytes and smooth muscle cells to endothelial cells. Plays a role in the migration of vascular smooth muscle cells and the formation of neointima at vascular injury sites. Required for normal development of the cardiovascular system. Required for normal recruitment of pericytes (mesangial cells) in the kidney glomerulus, and for normal formation of a branched network of capillaries in kidney glomeruli. Promotes rearrangement of the actin cytoskeleton and the formation of membrane ruffles. Binding of its cognate ligands - homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFD -leads to the activation of several signaling cascades; the response depends on the nature of the bound ligand and is modulated by the formation of heterodimers between PDGFRA and PDGFRB. Phosphorylates PLCG1, PIK3R1, PTPN11, RASA1/GAP, CBL, SHC1 and NCK1. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, mobilization of cytosolic Ca(2+) and the activation of protein kinase C. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to the activation of the AKT1 signaling pathway. Phosphorylation of SHC1, or of the C-terminus of PTPN11, creates a binding site for GRB2, resulting in the activation of HRAS, RAF1 and down-stream MAP kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation and activation of SRC family kinases. Promotes phosphorylation of PDCD6IP/ALIX and STAM (By similarity). Receptor signaling is down-regulated by protein phosphatases that dephosphorylate the receptor and its down-stream effectors, and by rapid internalization of the activated receptor.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225618