

Product datasheet for **SC309979**

PDGF Receptor beta (PDGFRB) (NM_002609) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDGF Receptor beta (PDGFRB) (NM_002609) Human Untagged Clone
Tag:	Tag Free
Symbol:	PDGF Receptor beta
Synonyms:	CD140B; IBGC4; IMF1; JTK12; KOGS; PDGFR; PDGFR-1; PDGFR1; PENTT
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002609 edited
 CCACGCGTCCGGAGGCTGCCAGCAGCCAGCAGTACTGCCCGCCCTATCTGGGACCCAGG
 ATCGCTCTGTGAGCAACTTGGAGCCAGAGAGAGATCAACAAGGAGGAGGAGAGACCCGG
 CCCCTCAGCCCTGCTGCCAGCAGCAGCCTGTGCTCGCCCTGCCAACGCAGATAGCCAG
 ACCCAGGGCGGCCCTCTGGCGGCTCTGCTCCTCCCGAAGGATGCTTGGGGAGTGAGGCG
 AAGCTGGGCGGCTCCTCTCCCCTACAGCAGCCCTTCTCCATCCCTCTGTTCTCCTGA
 GCCTTCAGGAGCCTGCACCAGTCTGCCTGTCTTCTACTCAGCTGTTACCCACTCTGGG
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 CTGTCCAGAGCCTGGAAGTGTGCCACACCAGAAGCCATCAGCAGCAAGGACACCATGCC
 GCTTCCGGGTGCGATGCCAGCTCTGGCCCTCAAAGGCGAGCTGCTGTTGTCTCTCTCT
 GTTACTTCTGGAACCACAGATCTCTCAGGGCCTGGTCGTCACACCCCGGGGCCAGAGCT
 TGTCTCAATGTCTCCAGCACCTTCGTTCTGACCTGCTCGGGTTCAGCTCCGGTGGTGTG
 GGAACGGATGTCCAGGAGCCCCACAGAAATGGCCAAGGCCAGGATGGCACCTTCTC
 CAGCGTGTCTCACACTGACCAACCTCACTGGGCTAGACACGGGAGAATACTTTTGACCCA
 CAATGACTCCCGTGGACTGGAGACCGATGAGCGGAAACGGCTCTACATCTTTGTGCCAGA
 TCCCACCGTGGGCTTCTCCCTAATGATGCCGAGGAATTCATCTTTCTCACGGAAAT
 AACTGAGATCACCATTCCATGCCGAGTAACAGACCCACAGCTGGTGGTGACACTGCACGA
 GAAGAAAGGGGACGTTGCACTGCCTGTCCCCTATGATCACCAACGTGGCTTTTTTGGTAT
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 TGCTACTATGTCTACAGACTCCAGGTGTCATCCATCAACGTCTCTGTGAACGCAGTGCA
 GACTGTGGTCCGCCAGGGTGAGAACATCACCTCATGTGCATTGTGATCGGGAATGAGGT
 GGTCAACTTCGAGTGGACATACCCCGCAAAGAAAGTGGGCGGCTGGTGGAGCCGGTGAC
 TGACTTCTCTTGGATATGCCTTACCACATCCGCTCCATCCTGCACATCCCCAGTGCCGA
 GTTAGAAGACTCGGGGACCTACACTGCAATGTGACGGAGAGTGTGAATGACCATCAGGA
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 GGGCACACTACAATTTGCTGAGCTGCATCGGAGCCGGACTGCAGGTAGTGTTCGAGGC
 CTACCCACGCCCCTGTCTGTGGTTCAAAGACAACCCGACCCCTGGGCGACTCCAGCGC



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TGGCGAAATCGCCCTGTCCACGCGCAACGTGTCGGAGACCCGGTATGTGTGAGAGCTGAC
 ACTGGTTCGCGTGAAGGTGGCAGAGGCTGGCCACTACACCATGCGGGCCTTCCATGAGGA
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 AGCACCCAGCATCTCCTGGCCTGGCCTGACCGGGCTTCTGTGAGCCAGGCTGCCCTTAT
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 GGCTTAGGAGGCAAGAAACTGCAGGGCCGTGACCAGCCCTCTGCCTCCAGGGAGGCCA
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 GTTAGGCTTGATGACCCAGAATCTAGGATTCTCTCCCTGGCTGACAGGTGGGAGACCGA
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 TGCTCATCCAGAAGAAAGCCAGTCTCCTCCCTATGATGCCAGTCCCTGCGTTCCCTGGC
 CCGAGCTGGTCTGGGGCCATTAGGCAGCCTAATTAATGCTGGAGGCTGAGCCAAGTACAG
 GACACCCCGACCTGCAGCCCTTGGCCAGGGCACTTGGAGCACACGCAGCCATAGCAAGT
 GCCTGTGTCCTTCCAGGCCATCAGTCTGGGGCTTTTTCTTTATCACCCCTCAGT
 CTTAATCCATCCACAGAGTCTAGAAGGCCAGACGGGCCCGCATCTGTGATGAGAATGT
 AAATGTGCCAGTGTGGAGTGGCCACGTGTGTGTCAGTATATGGCCCTGGCTCTGCATT

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GGACCTGCTATGAGGCTTTGGAGGAATCCCTCACCCCTCTCTGGGCCTCAGTTTCCCCTTC
AAAAATGAATAAGTCGGACTTATTAACCTGAGTGCCTTGCCAGCACTAACATTCTAGA
GTATTCAGGTGGTTGCACATTTGTCCAGATGAAGCAAGGCCATATACCCTAAACTTCCA
TCCTGGGGGTGAGCTGGGCTCCTGGGAGATTCCAGATCACACATCACACTCTGGGGACTC
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TGACTTAGAGTGACAGCCGGTGTCTGAAAGCCCCAGCAGCTGCCCCAGGGACATGGG
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GACAAAGAGGGCAAATGAGATCACCTCCTGCAGCCACCACTCCAGCACCTGTGCCGAGG
TCTGCGTCGAAGACAGAATGGACAGTGAGGACAGTTATGTCTTGTAAAAGACAAGAAGCT
TCAGATGGGTACCCCAAGAAGGATGTGAGAGGTGGGCGCTTTGGAGGTTTGCCCTCACC
CACCAGCTGCCCCATCCCTGAGGCAGCGCTCCATGGGGGTATGGTTTTGTCACTGCCAG
ACCTAGCAGTGACATCTCATTGTCCCAGCCCAGTGGGCATTGGAGGTGCCAGGGGAGTC
AGGGTTGTAGCCAAGACGCCCCGCACGGGGAGGGTTGGGAAGGGGGTGCAGGAAGCTCA
ACCCCTCTGGGCACCAACCCTGCATTGCAGTTGGCACCTTACTTCCCTGGGATCCCCAG
AGTTGGTCCAAGGAGGGAGAGTGGGTTCTCAATACGGTACCAAAGATATAATCACCTAGG
TTTACAAATATTTTTAGGACTCAGTAACTCACATTTATACAGCAGAAATGCTATTTTG
TATGCTGTTAAGTTTTTCTATCTGTGTACTTTTTTTAAGGGAAAGATTTTAATATTTAA
CCTGGTCTTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
    
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_002609 unedited
GTTTCGNCATTTGTAATACGACTCACTATAGGGNCGGCCGNAATTCCTGGGATATCGT
CGACCCACGCGTCNCGGAGCTGCCAGCAGCCAGCAGTACTGCCCGCCCTATCTGGGACC
CAGGATCGCTCTGTGAGCAACTTGGAGCCAGAGAGGAGATCAACAAGGAGGAGGAGAGAG
CCGGCCCCCTCAGCCCTGCTGCCAGCAGCAGCCTGTGCTCGCCCTGCCAACGCAGATAG
CCAGACCCAGGGCGGCCCTCTGGCGGCTCTGCTCCTCCGAAGGATGCTTGGGGAGTGA
GGCGAAGCTGGGCGCTCCTCTCCCCTACAGCAGCCCCCTTCTCCATCCCTCTGTTCTC
CTGAGCCTTCAGGAGCCTGCACCAGTCTGCCTGTCTTACTCAGCTGTTACCCACTC
TGGGACCAGCAGTCTTTCTGATAACTGGGAGAGGGCAGTAAGGAGGACTTCTGGAGGGG
GTGACTGTCCAGAGCCTGAACTGTGCCACACCAGAAGCCATCAGCAGCAAGGACACCA
TGCGGCTTCCGGGTGCGATGCCAGCTCTGGCCCTCAAAGGCGAGCTGCTGTTGCTGCTC
TCCTGTTACTTCTGGAACACAGATCTCTCAGGGCCTGGTCGTCACACCCCGGGGCCAG
AGCTTGTCTCAATGTCTCCAGCACCTTCGTTCTGACCTGCTCGGGTTCAGCTCCGGTGG
TGTGGGAACGGATGTCCAGGAGCCCCACAGGAATGGCCAAAGCCCAGGATGGCACCTT
CTCCAGCGTGCTCACACTGACCAACCTCACTGGGCTAGACACGGC
    
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Restriction Sites:

Please inquire

ACCN:

NM_002609

Insert Size:

5700 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: There is 1 nucleotide difference between the OriGene clone and the NCBI reference ORF. OriGene considers these to be polymorphisms and to reflect the natural differences between individuals. These result in the substitution of 1 amino acids.

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_002609.3](#), [NP_002600.1](#)

RefSeq Size: 5718 bp

RefSeq ORF: 3321 bp

Locus ID: 5159

UniProt ID: [P09619](#)

Cytogenetics: 5q32

Domains: pkinase, TyrKc, S_TKc, ig, IGc2, IG

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase, Transmembrane

Protein Pathways: Calcium signaling pathway, Colorectal cancer, Cytokine-cytokine receptor interaction, Focal adhesion, Gap junction, Glioma, MAPK signaling pathway, Melanoma, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton

Gene Summary:

The protein encoded by this gene is a cell surface tyrosine kinase receptor for members of the platelet-derived growth factor family. These growth factors are mitogens for cells of mesenchymal origin. The identity of the growth factor bound to a receptor monomer determines whether the functional receptor is a homodimer (PDGFB or PDGFD) or a heterodimer (PDGFA and PDGFB). This gene is essential for normal development of the cardiovascular system and aids in rearrangement of the actin cytoskeleton. This gene is flanked on chromosome 5 by the genes for granulocyte-macrophage colony-stimulating factor and macrophage-colony stimulating factor receptor; all three genes may be implicated in the 5-q syndrome. A translocation between chromosomes 5 and 12, that fuses this gene to that of the ETV6 gene, results in chronic myeloproliferative disorder with eosinophilia. [provided by RefSeq, Aug 2017]