

Product datasheet for **SC323694**

PDGF Receptor alpha (PDGFRA) (NM_006206) Human Untagged Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | PDGF Receptor alpha (PDGFRA) (NM_006206) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | PDGF Receptor alpha |
| Synonyms: | CD140A; PDGFR-2; PDGFR2 |
| Mammalian Cell Selection: | None |
| Vector: | <u>pCMV6-XL4</u> |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| Fully Sequenced ORF: | >NCBI ORF sequence for NM_006206, the custom clone sequence may differ by one or more nucleotides |

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ATGGGGACTTCCCATCCGCGCTTCTGGTCTTAGGCTGTCTTCTCACAGGGCTGAGCCTAATCCTCTGCC
AGCTTTCATTACCCTCTATCCTTCCAAATGAAAATGAAAAGTTGTGCAGCTGAATTCATCCTTTTCTCT
GAGATGCTTTGGGGAGAGTGAAGTGAAGTGGCAGTACCCCATGTCTGAAGAAGAGAGCTCCGATGTGGAA
ATCAGAAATGAAGAAAACAACAGCGGCTTTTGTGACGGTCTTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT
ACACAGGGTGTACTTGTACTTACAACCACACTCAGACAGAAGAGAATGAGCTGAAGGCAGGCACAT
TTACATCTATGTCCAGACCCAGATGTAGCCTTGTACCTCTAGGAATGACGGATTATTTAGTCATCGTG
GAGGATGATGATTCTGCCATTATACCTTGTGCGACAACCTGATCCCGAGACTCCTGTAACCTTACACAACA
GTGAGGGGGTGGTACCTGCCTCCTACGACAGCAGACAGGGCTTAAATGGGACCTTCACTGTAGGGCCCTA
TATCTGTGAGGCCACCGTCAAAGGAAAAGATTCCAGACCATCCCATTTAATGTTTATGCTTTAAAAGCA
ACATCAGAGCTGGATCTAGAAATGGAAGCTCTTAAAACCGTGTATAAGTCAGGGGAAACGATTGTGGTCA
CCTGTGCTGTTTTAACAATGAGGTGGTTGACCTTCAATGGACTTACCCTGGAGAAGTGAAGGCAAAGG
CATCACAATGCTGGAAGAAATCAAAGTCCCATCCATCAAATTGGTGTACTTTGACGGTCCCGAGGCC
ACGGTGAAGACAGTGGAGATTACGAATGTGCTGCCCCCAGGCTACCAGGGAGGTCAAAGAAATGAAGA
AAGTCACTATTTCTGTCCATGAGAAAGTTTTCATTGAAATCAAACCCACCTTCAAGCAGTTGGAAGCTGT
CAACCTGCATGAAGTCAAACATTTTGTGTAGAGGTGCGGGCCTACCCACCTCCAGGATATCCTGGCTG
AAAAACAATCTGACTCTGATTGAAAATCTCACTGAGATCACCCTGATGTGGAAAAGATTCAAGAAATAA
GGTATCGAAGCAAATTAAGCTGATCCGTGCTAAGGAAGAAGACAGTGGCCATTATACTATTGTAGCTCA
AAATGAAGATGCTGTGAAGAGCTATACTTTGAACTGTTAACTCAAGTTCCTTCATCCATTCTGGACTTG
GTCGATGATCACCATGGCTCAACTGGGGGACAGACGGTGAAGTGCACAGCTGAAGGCACGCCGCTTCTCTG
ATATTGAGTGGATGATATGCAAAGATATTAAGAAATGTAATAATGAAACTTCTGGACTATTTTGGCCAA
CAATGTCTCAAACATCATCAGGAGATCCACTCCCGAGACAGGAGTACCGTGGAGGGCCGTGTGACTTTC
GCCAAAGTGGAGGAGACCATCGCCGTGCGATGCCTGGCTAAGAATCTCCTTGGAGCTGAGAACCGAGAGC
TGAAGCTGGTGGCTCCACCCCTGCGTTCTGAACCTCACGGTGGCTGCTGCAGTCTGGTGTGTTGGTGTAT
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TGTGATCATCTCACTTATTGTCCTGGTTGTCATTTGAAACAGAAACCGAGGTATGAAATTCGCTGGAGG
 GTCATTGAATCAATCAGCCAGATGGACATGAATATTTATGTGGACCCGATGCAGCTGCCTTATGACT
 CAAGATGGGAGTTTCCAAGAGATGGACTAGTGCTTGGTCGGGTCTTGGGGTCTGGAGCGTTTGGGAAGGT
 GGTTGAAGGAACAGCCTATGGATTAAGCCGGTCCCAACCTGTCATGAAAGTTGCAGTGAAGATGCTAAAA
 CCCACGGCCAGATCCAGTGAAAAACAAGCTCTCATGTCTGAACTGAAGATAATGACTCACCTGGGGCCAC
 ATTTGAACATTGTAACCTTGTCTGGGAGCCTGCACCAAGTCAGGCCCATTTACATCATCACAGAGATTG
 CTTCTATGGAGATTTGGTCAACTATTTGCATAAGAATAGGGATAGCTTCTGAGCCACCACCCAGAGAAG
 CCAAAGAAAGAGCTGGATATCTTTGGATTGAACCTGCTGATGAAAGCACACGGAGCTATGTTATTTTAT
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 AAGGAAAGAGGTTTCTAAATATTCGACATCCAGAGATCACTCTATGATCGTCCAGCCTCATATAAGAAG
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 TGATCTGGCTGCTCGAACGTCCTCTGGCACAAGGAAAATTGTGAAGATCTGTGACTTTGGCCTGGCC
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 CTGAGAGCATCTTTGACAACCTCTACACCACACTGAGTGTGCTGGTCTTATGGCATTCTGCTCTGGGA
 GATCTTTTCCCTTGGTGGCACCCCTTACCCCGCATGATGGTGGATTCTACTTTCTACAATAAGATCAAG
 AGTGGGTACCGGATGGCCAAGCCTGACCACGCTACCAGTGAAGTCTACGAGATCATGGTGAATGCTGGA
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 ATATAAAAAGAGTTATGAAAAAATTCACCTGGACTTCTGAAAGAGTGACCATCTGCTGTGGCACGCATG
 CGTGTGGACTCAGACAATGCATACATTGGTGTACCTACAAAAACGAGGAAGACAAGCTGAAGGACTGGG
 AGGGTGGTCTGGATGAGCAGAGACTGAGCGCTGACAGTGGCTACATCATTCTCTGCCTGACATTGACCC
 TGTCCCTGAGGAGGAGGACCTGGCAAGAGGAACAGACACAGCTCGCAGACCTTGAAGAGAGTGCCATT
 GAGACGGGTTCCAGCAGTCCACCTTCAAGAGAGAGGACGAGACCATTGAAGACATCGACATGATGG
 ATGACATCGGCATAGACTCTTCAGACCTGGTGAAGACAGCTTCTGTAA

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_006206 unedited
 CCCGCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTATGAA
 CCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACAGAAACGCGTTTTTTGA
 GCCCACTACTGTTGGAGCTACAGGGAGAGAAAACAGAGGAGGAGACTGCAAGAGATCATTGGAGGCCGTGG
 GCACGCTCTTTACTCCATGTGTGGGACATTCATTGCGGAATAACATCGGAGGAGAAGTTTCCAGAGCTA
 TGGGACTTCCATCCGCGTTCCTGGTCTTAGGCTGTCTTCTCACAGGGCTGAGCCTAATCCTCTGCCA
 GCTTTCATTACCCTCTATCCTTCCAAATGAAAATGAAAAGGGTGGTGCAGCTGATTTTCCTTTTTTCT
 CTGAAATGCCTTTGGGGAAGAGTGAAGTGAAGTGGCAGTACCCCATTTGTCTGAAGAAAGAAAGCTCCG
 ATGGTGGAAATCAGAAATGGAGAAAAACCCGGCGGGCCTTTTTGGGAACGGTCTTGAATTGAGCATTG
 CCTCCCCGGCCACCCAGGTTGTCCACTGTCATATCACACACTCAACGAGAAGAGATGACCTGAAGCG
 CGGCATTTTCACTCTATGTCCAACCGAGTGACCTTGGCTCTTGAATGACGGATTTTACTCTCTGGAGA
 GATAGATCGGCTTAACTGGGCCAAGTATCGAACTCGTAAACTAACAAATTGAGGTGTACCGTCTCACGGA
 ACGGTTAGGACATCAGTAGCCTATTTGAGCTTTAGAAGTCAACCATATAGTTTTTAACTTAC

Kinase Domain Sequence:

>SC323694 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation
 AWKGMTAGTGCTTGGTCGGTCTTGGGCTGGAGCGTTTGGGAAGGTGGTTGAAGGAACAGCCTATGGA
 TTAAGCCGGTCCCAACCTGTCATGAAAGTTGCAGTGTATGCTAAAACCCACGGCCAGATCCAGTGAAA
 AACAAAGCTCTCATGTCTGAACTGAAGATAATGACTCACCTGGGGCCACATTTGAACATTGTAACCTTGT
 GGGAGCCTGCACCAAGTCAGGCCCATTTACATCATCACAGAGTA

Restriction Sites:

Please inquire

ACCN:

NM_006206

Insert Size:

6190 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." [Cell, 2008 May p536-548.](#)

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_006206.3](#), [NP_006197.1](#)

RefSeq Size: 6574 bp

RefSeq ORF: 3270 bp

Locus ID: 5156

UniProt ID: [P16234](#)

Cytogenetics: 4q12

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, Endocytosis, Focal adhesion, Gap junction, Glioma, MAPK signaling pathway, Melanoma, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton

Gene Summary:

This gene encodes 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 or a heterodimer, composed of both platelet-derived growth factor receptor alpha and beta polypeptides. Studies suggest that this gene plays a role in organ development, wound healing, and tumor progression. Mutations in this gene have been associated with idiopathic hypereosinophilic syndrome, somatic and familial gastrointestinal stromal tumors, and a variety of other cancers. [provided by RefSeq, Mar 2012]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments and orthologous data.