

Product datasheet for **RG202275**

P4HB (NM_000918) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	P4HB (NM_000918) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	P4HB
Synonyms:	CLCRP1; DSI; ERBA2L; GIT; P4Hbeta; PDI; PDIA1; PHDB; PO4DB; PO4HB; PROHB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG202275 representing NM_000918
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGCGCCGCGCTCTGCTGTGCTTGGCCGTGGCCGCCCTGGTGC GCGCCGACGCCCCCGAGGAGGAG
 ACCACGTCTGGTGTGCGGAAAAGCAACTTCGCGGAGGCGCTGGCGGCCACAAGTACCTGCTGGTGG
 GTTCTATGCCCTTGGTGTGGCCACTGCAAGGCTCTGGCCCTGAGTATGCCAAAGCCGCTGGGAAGCTG
 AAGGCAGAAGGTTCCGAGATCAGGTTGGCCAAGGTGGACGCCACGGAGGAGTCTGACCTGGCCAGCAGT
 ACGGCGTGC GCGGCTATCCCACCATCAAGTTCTTCAGGAATGGAGACACGGCTTCCCCAAGGAATATAC
 AGCTGGCAGAGAGGCTGATGACATCGTGAAGTGGCTGAAGAAGCGCACGGGCCGCGCTGCCACCACCTG
 CCTGACGGCGCAGCTGCAGAGTCTTGGTGGAGTCCAGCGAGGTGGCTGTATCGGCTTCTCAAGGACG
 TGGAGTCGGACTCTGCCAAGCAGTTTTTGCAGGCAGCAGAGGCCATCGATGACATACCATTGGGATCAC
 TTCCAACAGTGACGTGTTCTCCAATACCAGCTCGACAAAGATGGGGTTGCTCTTTAAGAAGTTTGAT
 GAAGGCCGGAACAACCTTTGAAGGGGAGGTCACCAAGGAGAACCTGCTGGACTTTATCAAACAACCCAGC
 TGCCCTTGTGATCGAGTTCACCGAGCAGACAGCCCCGAAGATTTTGGAGGTGAAATCAAGACTCACAT
 CCTGCTGTTCTTGCCCAAGAGTGTGCTGACTATGACGGCAAACCTGAGCAACTTCAAACAGCAGCCGAG
 AGCTTCAAGGGCAAGATCCTGTTTATCTTCATCGACAGCGACCACCCGACAACCCAGCGCATCCTCGAGT
 TCTTTGGCCTGAAGAAGGAAGAGTGC GCGCCGTGCGCCTCATCACCTGGAGGAGGAGATGACCAAGTA
 CAAGCCGAATCGGAGGAGCTGACGGCAGAGAGGATCACAGATTCTGCCACCGCTTCTGGAGGGCAAA
 ATCAAGCCCCACCTGATGAGCCAGGAGCTGCCGAGGACTGGGACAAGCAGCCTGTCAAGGTGCTTGTG
 GGAAGAACCTTGAAGACGTGGCTTTTGTGAGAAAAAAGCCTTTTGTGGAGTTCTATGCCCATGGTG
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 GTCATCGCCAAGATGGACTCGACTGCCAACGAGGTGGAGGCCGTCAAAGTGCACAGCTTCCCCACTCA
 AGTTCTTTCTGCCAGTGCCGACAGGACGGTCATTGATTACAACGGGAACGCACGCTGGATGGTTTTAA
 GAAATTCCTGGAGAGCGGTGGCCAGGATGGGGCAGGGGATGATGACGATCTCGAGGACCTGGAAGAAGCA
 GAGGAGCCAGACATGGAGGAAGACGATGATCAGAAAGCTGTGAAAGATGAACTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

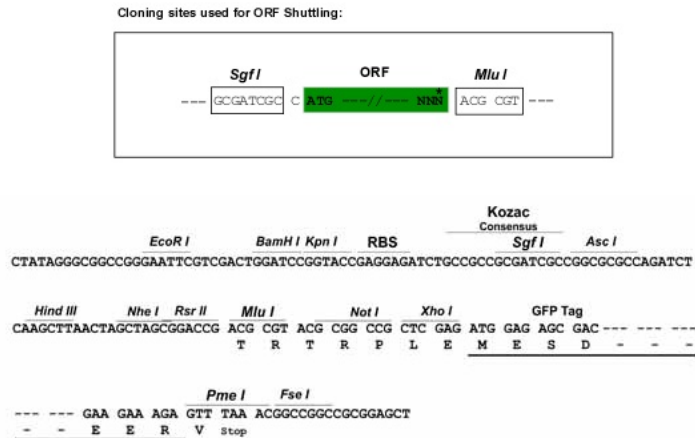
>RG202275 representing NM_000918
 Red=Cloning site Green=Tags(s)

MLRRALLCLAVAALVRADAPEEEDHVLVLRKSNFAEALAAHKYLLVEFYAPWCGHCKALAPEYAKAAGKL
 KAEGSEIRLAKVDATEESDLAQYGVRYPTIKFFRNGDTASPKYTAGREADDIVNWLKKRTGPAATTL
 PDGAAAESLVESEVAVIGFFKDVESDAKQFLQAAEAIDIPFGITSNSDVFSKYQLDKDGVVLFKKFD
 EGRNFFEGEVTKENLLDFIKHNQLPLVIEFTEQTAPKIFGGEIKTHILLFLPKSVSDYDGKLSNFKTAAE
 SFGKILFIFIDSHTDNQRILEFFGLKKEECPAVRLITLEEEMTKYKPESEELTAERITEFCHRFLEGK
 IKPHLMSQELPEDWDKQPVKVLVGKNFEDVAFDEKKNVFEFYAPWCGHCKQLAPIWDLKGETYKDHENI
 VIAKMDSTANEVEAVKVHSFPTLKFFPASADRTVIDYNGERTLDGFKKFLESGGQDQAGDDDDLEDLEEA
 EEPDMEEDDDQKAVKDEL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

ACCN: NM_000918

ORF Size: 1524 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).

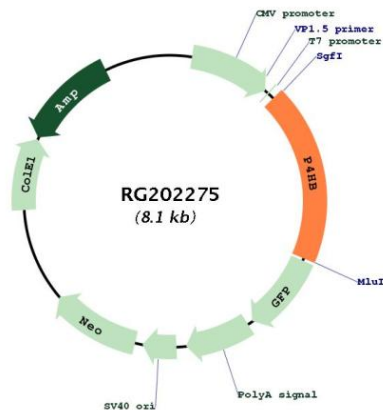
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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_000918.4](#)

RefSeq Size: 2596 bp
 RefSeq ORF: 1527 bp
 Locus ID: 5034
 UniProt ID: [P07237](#)
 Cytogenetics: 17q25.3
 Domains: thiored
 Protein Families: Druggable Genome

Gene Summary: This gene encodes the beta subunit of prolyl 4-hydroxylase, a highly abundant multifunctional enzyme that belongs to the protein disulfide isomerase family. When present as a tetramer consisting of two alpha and two beta subunits, this enzyme is involved in hydroxylation of prolyl residues in procollagen. This enzyme is also a disulfide isomerase containing two thioredoxin domains that catalyze the formation, breakage and rearrangement of disulfide bonds. Other known functions include its ability to act as a chaperone that inhibits aggregation of misfolded proteins in a concentration-dependent manner, its ability to bind thyroid hormone, its role in both the influx and efflux of S-nitrosothiol-bound nitric oxide, and its function as a subunit of the microsomal triglyceride transfer protein complex. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG202275