

Product datasheet for **RC204694**

PAH (NM_000277) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAH (NM_000277) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAH
Synonyms:	PH; PKU; PKU1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC204694 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCCACTGCGTCTCTGAAAAACCCAGGCTTGGGCAGGAACTCTCTGACTTTGGACAGGAAACAAGCT
 ATATTGAAGACAACCTGCAATCAAAATGGTGCCATATCGCTGATCTTCTCACTCAAAGAAGAAGTTGGTGC
 ATTGGCCAAAGTATTGCGCTTATTTGAGGAGAATGATGTAACCTGACCCACATTGAATCTAGACCTTCT
 CGTTTAAAGAAAGATGAGTATGAATTTTTACCCATTTGGATAAACGTAGCCTGCCTGCTGACAAACA
 TCATCAAGATCTTGAGGCATGACATTGGTGCCACTGTCCATGAGCTTTCACGAGATAAGAAGAAAGACAC
 AGTGCCCTGGTCCCAAGAACCATTCAAGAGCTGGACAGATTTGCCAATCAGATTCTCAGCTATGGAGCG
 GAACTGGATGCTGACCACCCTGGTTTTAAAGATCCTGTGTACCGTGAAGACGGAAGCAGTTTGCTGACA
 TTGCTTACAACCTACCGCCATGGGCAGCCATCCCTCGAGTGAATACATGGAGGAAGGAAAGAAAACATG
 GGGCACAGTGTCAAGACTCTGAAGTCTTGATAAAACCATGCTTGCTATGAGTACAATCACATTTTT
 CCACCTTCTGAAAAGTACTGTGGCTCCATGAAGATAACATTCGCCAGCTGGAAGACGTTTTCTCAGTTCC
 TGCAGACTTGCACTGGTTCCCGCTCCGACCTGTGGCTGGCTGCTTTCCTCTCGGGATTTCTGGGTGG
 CCTGGCCTCCGAGTCTTCCACTGCACACAGTACATCAGACATGGATCCAAGCCCATGTATACCCCCGAA
 CCTGACATCTGCCATGAGCTGTTGGGACATGTGCCCTTGTTCAGATCGCAGCTTTGCCAGTTTTCCC
 AGGAAATTGGCCTTGCTCTCTGGGTGCACCTGATGAATACATTGAAAAGCTCGCCACAATTTACTGGTT
 TACTGTGGAGTTGGGCTCTGCAACAAGGAGACTCCATAAAGGCATATGGTGTGGGCTCCTGTATCC
 TTTGGTGAATTACAGTACTGCTTATCAGAGAAGCCAAAGCTTCTCCCCCTGGAGCTGGAGAAGCAGCCA
 TCCAAAATTACACTGTACGGAGTTCAGCCCCCTATTACGTGGCAGAGAGTTTTAATGATGCCAAGGA
 GAAAGTAAGGAACTTTGCTGCCACAATACCTCGGCCCTTCTCAGTTTCGCTACGACCCATACACCCAAAGG
 ATTGAGGTCTTGACAATACCCAGCAGCTTAAGATTTGGCTGATTCCATTAACAGTGAAATTGGAAATCC
 TTTGCAGTGCCCTCCAGAAAATAAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204694 protein sequence
 Red=Cloning site Green=Tags(s)

MSTAVLENPGLGRKLSDFGQETSYIEDNCNQNGAISLIFSLKEEVGALAKVLRLEFEENDVNLTHIESRPS
 RLKKDEYEFFTHLDKRSLPALTNIKILRHDIGATVHEL SRDKKKTVPWFPRTIQELDRFANQILSYGA
 ELDDADHPGFKDPVYRARRKQFADIAYNRHRGQPIPRVEYMEEGKKTWGTVFKTLKSLYKTHACYEYNHIF
 PLLEKYCGFHEDNIPQLEDVSQLTCTGFRLRPVAGLLSSRDFLGGLAFRVHCTQYIRHGSKPMYTP
 PDICHELLGHVPLFSDRSFAQFSQEI GLASL GAPDEYIEKLATIIYWFTVEFGLCKQGDSIKAYGAGLLSS
 FGELQYCLSEKPKLLPLELEKTAIQNYTVTEFQPLYYVAESFNDAKEKVRNFAATIPRPFVSVRYDPYTQR
 IEVLDNTQQLKILADSINSEIGILCSALQKIK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6672_d05.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000277

ORF Size: 1356 bp

OTI Disclaimer: 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_000277.1](#), [NP_000268.1](#)

RefSeq Size: 2680 bp

RefSeq ORF: 1359 bp

Locus ID: 5053

UniProt ID: [P00439](#)

Cytogenetics: 12q23.2

Domains: bipterin_H, ACT

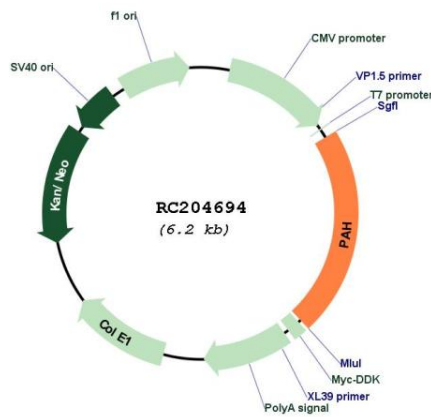
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Phenylalanine, tyrosine and tryptophan biosynthesis, Phenylalanine metabolism

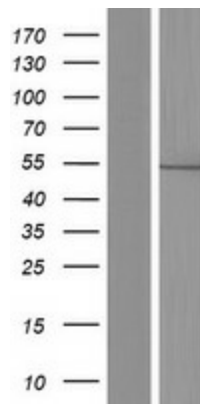
MW: 51.8 kDa

Gene Summary: This gene encodes a member of the bipterin-dependent aromatic amino acid hydroxylase protein family. The encoded phenylalanine hydroxylase enzyme hydroxylates phenylalanine to tyrosine and is the rate-limiting step in phenylalanine catabolism. Deficiency of this enzyme activity results in the autosomal recessive disorder phenylketonuria. [provided by RefSeq, Aug 2017]

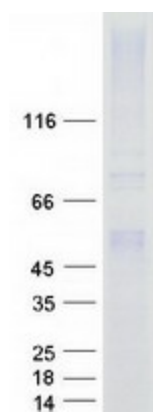
Product images:



Circular map for RC204694



Western blot validation of overexpression lysate (Cat# [LY424825]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204694 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAH protein (Cat# [TP304694]). The protein was produced from HEK293T cells transfected with PAH cDNA clone (Cat# RC204694) using MegaTran 2.0 (Cat# [TT210002]).