

Product datasheet for RC216374

DPYD (NM_000110) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DPYD (NM_000110) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DPYD
Synonyms:	DHP; DHPDHASE; DPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216374 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCCTGTGCTCAGTAAGGACTCGGCGGACATCGAGAGTATCCTGGCTTTAAATCCTCGAACACAAA
CTCATGCAACTCTGTGTTCCACTTCGGCCAAGAAATTAGACAAGAAACATTGGAAAAGAAATCCTGATAA
GAACTGCTTTAATTGTGAGAAGCTGGAGAATAATTTTGATGACATCAAGCACACGACTCTGGTGAGCGA
GGAGCTCTCCGAGAAGCAATGAGATGCCTGAAATGTGCAGATGCCCGTGTGAGAAGAGCTGTCCAATA
ATCTTGATATTAATCATTCAACAAGTATTGCAAACAAGAATTATTGGAGCTGCTAAGATGATATT
TTCTGACAACCCACTTGGTCTGACTTGTGAATGGTATGTCCAACCTCTGATCTTTGTGTAGGTGGATGC
AATTTATATGCCACTGAAGAGGGACCCATTAATATTGGTGGATTGCAGCAATTTGCTACTGAGGTATTCA
AAGCAATGAGTATCCACAGATCAGAAATCCTTCGCTGCCTCCCCAGAAAAATGTCTGAAGCCTATTC
TGCAAAGATTGCTCTTTTGGTGTGGGCTGCAAGTAAAGTTGTGCTTCTTTTGGCTCGATTGGGG
TACTCTGACATCACTATATTTGAAAAACAAGAATATGTTGGTGGTTAAAGTACTTCTGAAATTCCTCAGT
TCCGGCTGCCGTATGATGTAGTGAATTTGAGATTGAGCTAATGAAGGACCTTGGTGAAGATAATTTG
CGGTAAGGCTTTTCCAGTAATGAAATGACTCTTAGCACTTTGAAAGAAAAAGGCTACAAAGCTGCTTTT
ATACATCAAAGACTTTTTGCCACTTGTAGCCAAGGCAGTAAAGCAGGAATGTGCGCCTGTCACTCTCC
ATTGCCATCGATACGGGAGTCGTGATTGACTTGGAGCTGGAGACACTGCCTTTGACTGTGCAACATCT
GCTCTACGTTGTGGAGCTCGCCGTGTTCATCGTCTTCAGAAAAGGCTTTGTTAATAAGAGCTGTCC
CTGAGGAGATGGAATTGCTAAGGAAGAAAAGTGTGAATTTCTGCCATTCTGTCCCCACGGAAGGTTAT
AGTAAAAGGTGGGAGAATTGTTGCTATGCAGTTTGTTCGGACAGAGCAAGATGAAACTGGAAAATGGAAT
GAAGATGAAGATCAGATGGTCCATCTGAAAGCCGATGTGGTCATCAGTGCCTTTGGTTTCAGTTCTGAGTG
ATCCTAAAGTAAAAGAAGCCTTGAGCCCTATAAAATTTAACAGATGGGGTCTCCAGAAGTAGATCCAGA
AACTATGCAAAGTGAAGCATGGTATTTGCAGGTGGTATGTCGTTGGTTTGCTAACACTACAGTG



[View online »](#)

GAATCGGTGAATGATGGAAAGCAAGCTTCTTGGTACATTCACAAAACGTCACAGTACAATATGGAGCTT
 CCGTTTCTGCCAAGCCTGAACTACCCCTCTTTTACACTCTATTGATCTGGTGGACATTAGTGTAGAAA
 GGCCGGATTGAAGTTTGTAAATCCTTTTGGTCTTGTAGCGCAACTCCAGCCACCAGCACATCAATGATT
 CGAAGAGCTTTTGAAGCTGGATGGGGTTTTGCCCTCACAAAACCTTCTCTTTGATAAAGGACATTGTGA
 CAAATGTTTCCCCAGAATCATCCGGGGAACCCTCTGGCCCCATGTATGGCCCTGGACAAAGCTCCTT
 TCTGAATATTGAGCTCATCAGTGAGAAAACGGCTGCATATTGGTGTCAAAGTGTCACTGAACTAAAGGCT
 GACTTTCCAGACAACATTGTGATTGTAGCATTATGTGCAGTTACAATAAAAAATGACTGGACGGAACCTTG
 CCAAGAAGTCTGAGGATTCTGGAGCAGATGCCCTGGAGTTAAATTTATCATGTCCACATGGCATGGGAGA
 AAGAGGAATGGGCTGGCCTGTGGGCAGGATCCAGAGCTGGTGGGAACATCTGCCGCTGGGTTAGGCAA
 GCTGTTACAGATTCCTTTTTTTGCAAGCTGACCCCAAATGTCACTGATATTGTGAGCATCGCAAGAGCTG
 CAAAGGAAGTGGTGCCAAATGGCGTTACAGCCACCAACTGTCTCAGGTCTGATGGGATTAATACTGA
 TGGCACACCTTGGCCAGCAGTGGGGATTGCAAAGCGAACTACATATGGAGGAGTGTCTGGGACAGCAATC
 AGACCTATTGCTTTGAGAGCTGTGACCTCCATTGCTCGTCTGCTCGCTGGATTTCCCATTTTGGCTACTG
 GTGGAATTGACTCTGCTGAAAGTGGTCTTCAGTTTCTCCATAGTGGTGTCTCCGCTCCAGGTATGCAG
 TGCCATTGAGAATCAGGATTTCACTGTGATCGAAGACTACTGCACTGGCCTCAAAGCCCTGCTTTATCTG
 AAAAGCATTGAAGAACTACAAGACTGGGATGGACAGAGTCCAGCTACTGTGAGTACCAGAAAGGGAAC
 CAGTTCACGATAGCTGAACTCATGGACAAGAACTGCCAAGTTTTGGACCTTATCTGGAACAGCGCAA
 GAAAATCATAGCAGAAAACAAGATTAGACTGAAAGAACAAAATGTAGCTTTTACCACCTTAAGAGAAA
 TGTTTTATCCCCAAAAGGCCTATTCCTACCATCAAGGATGTAATAGGAAAAGCACTGCAGTACCTTGGAA
 CATTGGTGAATTGAGCAACGTAGAGCAAGTTGTGGCTATGATTGATGAAGAAATGTGTATCAACTGTGG
 TAAATGCTACATGACCTGTAATGATTCTGGCTACCAGGCTATACAGTTTATGATCCAGAAACCCACCTGCC
 ACCATAACCGACACTTGTACAGGCTGACTCTGTGTCTCAGTGTTCCTATTGTGACTGCATCAAAA
 TGGTTTCCAGGACAACACCTTATGAACCAAGAGAGGCGTACCCTTATCTGTGAATCCGGTGTGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216374 protein sequence
 Red=Cloning site Green=Tags(s)

MAPVLSKDSADIESILALNPRTQTHATLCASTSAKLLDKKHWRNPKNCFNCEKLENNFDDIKHTTLGER
 GALREAMRCLKCADAPCQKSCPTNLDIKSFITSIANKNYYGAAKMIFSDNPLGLTCGMVCPSTDLVGGC
 NLYATEEGPINIGGLQQFATEVFKAMSIQIRNPSLPPPEKMSEAYSAKIALFGAGPASISCAFLARLG
 YSDITIFEKQEYVGGTSTSEIPQFRLPYDVVNFIEELMKDLGVKIIICGKSLSVNEMTLSTLKEKGYKAAF
 IGIGLPEPNKDAIFQGLTQDQGFYTSKDFLPLVAKGSKAGMCACHSPLPSIRGVVIVLGAGDTAFDCATS
 ALRCGARRVFIIVFRKGFVNIRAVPEEMELAKEEKEFLPFLSPRKVIVKGGRIVAMQFVRTEQDETGWK
 EDEDQMVHLKADVVISAFGSVLSDPKVKEALSPIKFNWGLPEVDPETMQTSEAWVFAGGDVVLANTTV
 ESVNDGKQASWYIHKYVQSQYGASVSAKPELPLFYTPIDLVDISVEMAGLKFNPFGLASATPATSTSMI
 RRAFEAGWGFALTKTFLDKDIVTNVSPRIIRGTTSGPMYGPQSSFLNIELISEKTAAYWCQSVTELKA
 DFPDNIVIASIMCSYNKNDWTELAKSEDSGADALELNLSCPHGMGERGMGLACGQDPELVRNICRWVRQ
 AVQIPFFAKLTPNVTDIVSIARAKEGGANGVTATNTVSGLMGLKSDGTPWPAVGIKRTTYGGVSGTAI
 RPIALRAVTSIARALPGFPILATGGIDS AESGLQFLHSGASVLQVCSAIQNQDFTVIEDYCTGLKALLYL
 KSIEELQDWDGQSPATVSHQKGPVPRIAELMDKLLPSFGPYLEQRKKIIAENKIRLKEQNVAFSPLKRN
 CFIPKRP IPTIKDVIGKALQYLGTFGELSNVEQVAMIDEEMCINCGKCYMTCNDSGYQAIQFDPETHLP
 TITDTCGTCLCLSVCPVDCIKMVSRTTPYEPKRGVPLSVNPVC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6680_e11.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000110

ORF Size: 3075 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_000110.4](#)

RefSeq Size: 4451 bp

RefSeq ORF: 3078 bp

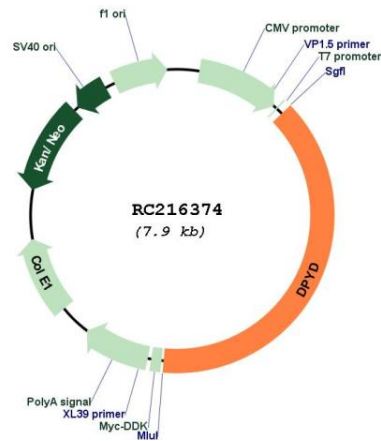
Locus ID: 1806

UniProt ID: [Q12882](#)
Cytogenetics: 1p21.3
Domains: DHOdehase, fer4
Protein Families: Druggable Genome
Protein Pathways: beta-Alanine metabolism, Drug metabolism - other enzymes, Metabolic pathways, Pantothenate and CoA biosynthesis, Pyrimidine metabolism

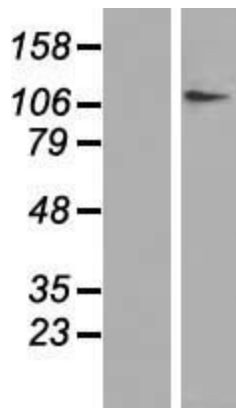
MW: 111.4 kDa

Gene Summary: The protein encoded by this gene is a pyrimidine catabolic enzyme and the initial and rate-limiting factor in the pathway of uracil and thymidine catabolism. Mutations in this gene result in dihydropyrimidine dehydrogenase deficiency, an error in pyrimidine metabolism associated with thymine-uraciluria and an increased risk of toxicity in cancer patients receiving 5-fluorouracil chemotherapy. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]

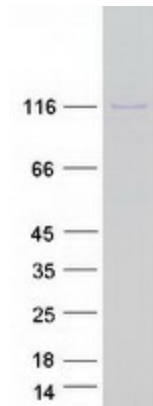
Product images:



Circular map for RC216374



Western blot validation of overexpression lysate (Cat# [LY424917]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216374 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DPYD protein (Cat# [TP316374]). The protein was produced from HEK293T cells transfected with DPYD cDNA clone (Cat# RC216374) using MegaTran 2.0 (Cat# [TT210002]).