

Product datasheet for **RG216374**

DPYD (NM_000110) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: DPYD (NM_000110) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: DPYD
Synonyms: DHP; DHPDHASE; DPD
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG216374 representing NM_000110
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCCTGTGCTCAGTAAGGACTCGGCGGACATCGAGAGTATCCTGGCTTTAAATCCTCGAACACAAA
 CTCATGCAACTCTGTGTTCCACTTCGGCCAAGAAATTAGACAAGAAACATTGGAAAAGAAATCCTGATAA
 GAACTGCTTTAATTGTGAGAAGCTGGAGAATAATTTTGATGACATCAAGCACACGACTCTGGTGAGCGA
 GGAGCTCTCCGAGAAGCAATGAGATGCCTGAAATGTGCAGATGCCCGTGTGAGAAGAGCTGTCCAACTA
 ATCTTGATATTAATCATTCAACAAGTATTGCAACAAGAAGTATTATGGAGCTGCTAAGATGATATT
 TTCTGACAACCCACTTGGTCTGACTTGTGGAATGGTATGTCCAACCTCTGATCTTTGTGTAGGTGGATGC
 AATTTATATGCCACTGAAGAGGGACCCATTAATATTGGTGGATTGCAGCAATTTGCTACTGAGGTATTCA
 AAGCAATGAGTATCCACAGATCAGAAATCCTTCGCTGCCTCCCCAGAAAAATGTCTGAAGCCTATTC
 TGCAAAGATTGCTCTTTTGGTGTGGGCTGCAAGTAAAGTTGTGCTTCTTTTGGCTCGATTGGGG
 TACTCTGACATCACTATATTTGAAAAACAAGAATATGTTGGTGGTTAAAGTACTTCTGAAATTCCTCAGT
 TCCGGCTGCCGTATGATGTAGTGAATTTGAGATTGAGCTAATGAAGGACCTTGGTGAAGATAATTTG
 CGGTAAGGCTTTCAGTGAATGAAATGACTCTTAGCACTTTGAAAGAAAAAGGCTACAAAGCTGCTTTC
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 ATACATCAAAGACTTTTTGCCACTTGTAGCCAAAGGCAGTAAAGCAGGAATGTGCGCCTGTCACTCTCC
 ATTGCCATCGATACGGGAGTCGTGATTGACTTGGAGCTGGAGACACTGCCTTTGACTGTGCAACATCT
 GCTCTACGTTGTGGAGCTCGCCGTGTTCATCGTCTTCAGAAAAGGCTTTGTTAATATAAGAGCTGTCC
 CTGAGGAGATGGAACCTTGTCTAAGGAAGAAAAGTGTGAATTTCTGCCATTCTGTCCCCACGGAAGTTAT
 AGTAAAAGGTGGGAGAATTGTTGCTATGCAGTTTGTTCGGACAGAGCAAGATGAAACTGGAAAATGGAAT
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 AACTATGCAAACTAGTGAAGCATGGTATTTGCAGGTGGTATGTCGTTGGTTTGGCTAACACTACAGTG



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GAATCGGTGAATGATGGAAAGCAAGCTTCTTGGTACATTCACAAAACGTCACAGTCACAATATGGAGCTT
 CCGTTTCTGCCAAGCCTGAACTACCCCTCTTTTACACTCCTATTGATCTGGTGGACATTAGTGTAGAAA
 GGCCGGATTGAAGTTTGTAAATCCTTTTGGTCTTGTAGCGCAACTCCAGCCACCAGCACATCAATGATT
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 CAAATGTTTCCCCAGAATCATCCGGGGAACCCTCTGGCCCCATGTATGGCCCTGGACAAAGCTCCTT
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 GACTTCCAGACAACATTGTGATTGCTAGCATTATGTGCAGTTACAATAAAAAATGACTGGACGGAACCTTG
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 AAGAGGAATGGGCTGGCTGTGGGCAGGATCCAGAGCTGGTGGGAACATCTGCCGCTGGGTTAGGCAA
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 CATTGGTGAATTGAGCAACGTAGAGCAAGTTGTGGCTATGATTGATGAAGAAATGTGTATCAACTGTGG
 TAAATGCTACATGACCTGTAATGATTCTGGCTACCAGGCTATACAGTTTGTATCCAGAAACCCACCTGCC
 ACCATAACCGACACTTGTACAGGCTGACTCTGTGTCTCAGTGTTCAGCTATTGTCGACTGCATCAAAA
 TGGTTTCCAGGACAACACCTTATGAACCAAGAGAGGCGTACCCTTATCTGTGAATCCGGTGTGT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG216374 representing NM_000110
 Red=Cloning site Green=Tags(s)

MAPVLSKDSADIESILALNPRTQTHATLCSSTAKKLDKKHWRNPDKNCFNCEKLENNFDDIKHTTLGER
 GALREAMRCLKCADAPCQKSCPTNLDIKSFITSIANKNYGAAKMIFSDNPLGLTCGMVCPTSDLVGGC
 NLYATEEGPINIGGLQQFATEVFKAMSIQIRNPSLPPPEKMSEAYSAKIALFGAGPASISCAFLARLG
 YSDITIFEKQEYVGGTSTSEIPQFRLPYDVVNFIEELMKDLGVKIIICGKSLSVNEMTLSTLKEKGYKAAF
 IGIGLPEPNKDAIFQGLTQDQGFYTSKDFLPLVAKGSKAGMCACHSPLPSIRGVVIVLGAGDTAFDCATS
 ALRCGARRVIVFRKGFVNIRAVPEEMELAKEEKEFLPFLSPRKVIVKGGRIVAMQFVRTEQDETGWKWN
 EDEDQMVHLKADVVISAFGSVLSDPKVKEALSPIKFNWGLPEVDPETMQTSEAWVFAGGDVVLANTTV
 ESVNDGKQASWYIHKYVQSQYGASVSAKPELPLFYTPIDLVDISVEMAGLKFNPFGLASATPATSTSMI
 RRAFEAGWGFALTKTFLDKDIVTNVSPRIIRGTTSGPMYGPQSSFLNIELISEKTAAYWCQSVTELKA
 DFPDNIVIASIMCSYNKNDWTELEAKKSEDSGADALELNLSCPHGMGERGMGLACGQDPELVRNICRWVRQ
 AVQIPFFAKLTPNVTDIVSIARAAGEGGANGVTATNTVSGLMGLKSDGTPWPAVGIKRRTYGGVSGTAI
 RPIALRAVTSIARALPGFPILATGGIDS AESGLQFLHSGASVQLVCSA IQNQDFTVIEDYCTGLKALLYL
 KSIEELQDWDGQSPATVSHQKGPVPRIAE LMDKKLPSFGPYLEQRKKIIAENKIRLKEQNVAFSPLKRN
 CFIPKRPIPTIKDVIKALQYLGTGELSNVEQVVAMIDEEMCINCGKCYMTCNDSGYQAIQFDPETHLP
 TITDCTGCTLCLSVCPDIVDCIKMVSRTTPYEPKRGVPLSVNPVC

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

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:

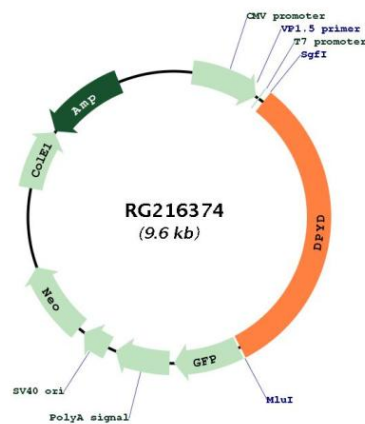
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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_000110.3](#), [NP_000101.2](#)

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
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 RG216374