

## Product datasheet for RC217737

### QDPR (NM\_000320) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	QDPR (NM_000320) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	QDPR
Synonyms:	DHPR; HDHPR; PKU2; SDR33C1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC217737 representing NM_000320 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCGGGCGGCTGCAGGCGAGGCGCGCCGGTGTGGTGTACGGCGGCAGGGCGCTCTGGGTT  
CTCGATGCGTGCAGGCTTTTCGGGCCCGCAACTGGTGGTTGCCAGCGTTGATGTGGTGGAGAATGAAGA  
GGCCAGCGCTAGCATCATTGTTAAAATGACAGACTCGTTCCTGAGCAGGCTGACCAGGTGACTGCTGAG  
GTTGAAAAGCTCTGGGTGAAGAGAAGGTGGATGCAATCTTTGCGTTGCTGGAGGATGGCCGGGGCA  
ATGCCAAATCCAAGTCTCTCTTTAAGAACTGTGACCTGATGTGGAAGCAGAGCATATGGACATCGACCAT  
CTCCAGCCATCTGGCTACCAAGCATCTCAAGGAAGGAGGCTCCTGACCTTGGCTGGCGCAAAGGCTGCC  
CTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGGTGTGTTACCCAGCTCTGCCAGAGCC  
TGGCTGGGAAGAACAGCGGCATGCCGCCGGGGCAGCCGCATCGCTGTGCTCCCGGTTACCCTGGATAC  
CCCAGTGAACAGGAAATCAATGCCTGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTGAA  
ACTTTCCATGACTGGATCACAGGAAAAACCGACCGAGCTCAGGAAGCCTAATCCAGGTGGTAACACAG  
AAGGAAGGACGGAACACCCAGCATATTTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC217737 representing NM\_000320  
Red=Cloning site Green=Tags(s)

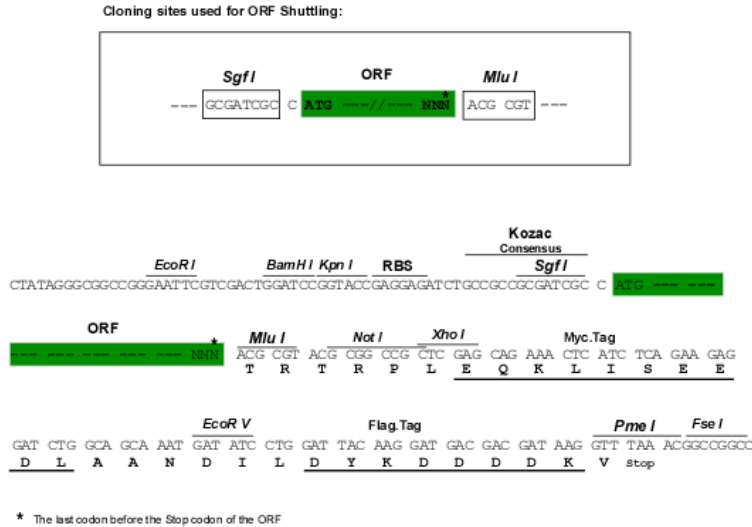
MAAAAAAGEARRVLVYGGRGALGSRCVQAFRARNWWVASVDVVENEEASASIIVKMTDSFTEQADQVTAE  
 VGKLLGEEKVDAILCVAGGWAGGNAKSKSLFKNCMLMWKQSIWTSTISSHLATKHLKEGGLLTLAGAKAA  
 LDGTPGMI GYGMAKGAVHQLCQSLAGKNSGMPGAAAIAVLPVTLDTPMNRKSMPEADFSWTPLEFLVE  
 TFHDWITGKNRPSSGSLIQVVTTEGRTELPAYF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6475\\_a11.zip](https://cdn.origene.com/chromatograms/mk6475_a11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000320

**ORF Size:** 732 bp

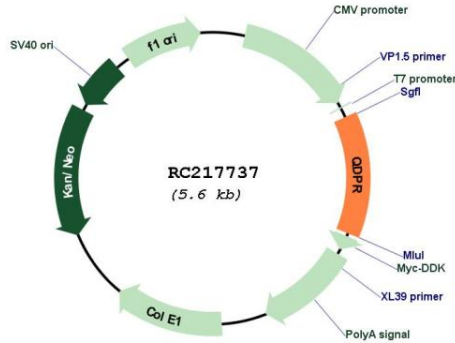
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

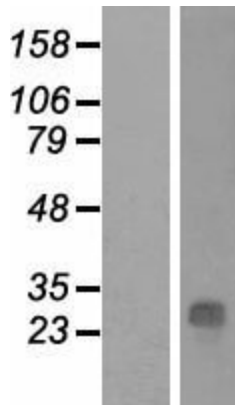
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_000320.3</a>
<b>RefSeq Size:</b>	1550 bp
<b>RefSeq ORF:</b>	735 bp
<b>Locus ID:</b>	5860
<b>UniProt ID:</b>	<a href="#">P09417</a>
<b>Cytogenetics:</b>	4p15.32
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Folate biosynthesis, Metabolic pathways
<b>MW:</b>	25.6 kDa
<b>Gene Summary:</b>	This gene encodes the enzyme dihydropteridine reductase, which catalyzes the NADH-mediated reduction of quinonoid dihydrobiopterin. This enzyme is an essential component of the pterin-dependent aromatic amino acid hydroxylating systems. Mutations in this gene resulting in QDPR deficiency include aberrant splicing, amino acid substitutions, insertions, or premature terminations. Dihydropteridine reductase deficiency presents as atypical phenylketonuria due to insufficient production of biopterin, a cofactor for phenylalanine hydroxylase. [provided by RefSeq, Jul 2008]

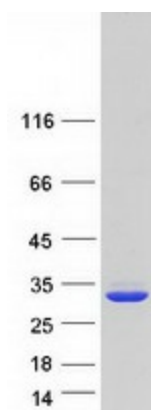
Product images:



Circular map for RC217737



Western blot validation of overexpression lysate (Cat# [LY424801]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217737 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified QDPR protein (Cat# [TP317737]). The protein was produced from HEK293T cells transfected with QDPR cDNA clone (Cat# RC217737) using MegaTran 2.0 (Cat# [TT210002]).