

Product datasheet for **RG202172**

Cytochrome P450 Reductase (POR) (NM_000941) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 Reductase (POR) (NM_000941) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cytochrome P450 Reductase
Synonyms:	CPR; CYPOR; P450R
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG202172 representing NM_000941
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGATCAACATGGGAGACTCCCACGTGGACACCAGCTCCACCGTGTCCGAGGCGGTGGCCGAAGAAGTAT
CTCTTTTCAGCATGACGGACATGATTCTGTTTTCGCTCATCGTGGGTCTCCTAACCTACTGGTTCCTCTT
CAGAAAGAAAAAGAAGTCCCGAGTTCACAAAAATTCAGACATTGACCTCCTCTGTGAGAGAGAGC
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CAGAGGAGTTTGCAACCGCCTGTCCAAGGACGCCACCCTACGGGATGCGAGGCATGTCAGCGGACCC
TGAGGAGTATGACCTGGCCGACCTGAGCAGCCTGCCAGAGATCGACAACGCCCTGGTGGTTTTCTGCATG
GCCACCTACGGTGAAGGAGACCCACCGACAATGCCAGGACTTCTACGACTGGTGCAGGAGACAGACG
TGGATCTCTCGGGTCAAGTTCGCGGTGTTGGTCTTGGGAACAAGACCTACGAGCACTCAATGCCAT
GGCAAGTACGTGGACAAGCGGCTGGAGCAGCTCGGCGCCAGCGCATCTTTGAGCTGGGGTGGGGCAG
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TTGGGGTGAAGCCACTGGCGAGGAGTCCAGCATTGCGCAGTACGAGCTTGTGGTCCACACCCGACATAGA
TGCGGCCAAGGTGACATGGGGGAGATGGGCGGCTGAAGAGCTACGAGAACCAGAAGCCCCCTTTGAT
GCCAAGAATCCGTTCTGGCTGCAGTACCACCAACCGGAAGCTGAACCAGGGAACCGAGCGCCACCTCA
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AGCCAACGACTCTGCTCTCGTCAACCAGCTGGGCAAAATCCTGGGTGCCGACCTGGAGCTGTGTATGCC
CTGAACAACCTGGATGAGGAGTCCAACAAGAAGCACCCATTCCCGTGCCTACGTCCTACCGCACGGCCC
TCACCTACTACCTGGACATCACCAACCGCCGCTACCAACGTGCTGTACGAGCTGGCGCAGTACGCCTC
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TGTTCTGTCGCAAGTCCCAGTTCGCTGCCCTCAAGGCCACCACGCTGTATCATGGTGGGCCCGG
CACCGGGTGGCACCCCTCATAGGCTTCATCCAGGAGCGGCCTGGCTGCGACAGCAGGGCAAGGAGGTG
GGGAGACGCTGTGTACTACGGCTGCCCGCTCGGATGAGGACTACCTGTACCGGAGGAGCTGGCGC
AGTTCCACAGGACGGTGCCTCACCCAGCTCAACGTGGCCTTCTCCCGGAGCAGTCCCACAAGGTCTA
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GTCTGTGGGGATGCACGGAACATGGCCAGGGATGTGCAGAACACCTTCTACGACATCGTGGCTGAGCTCG
GGCCATGGAGCACGCGCAGGCGGTGGACTACATCAAGAACTGATGACCAAGGGCCGCTACTCCCTGGA
CGTGTGGAGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG202172 representing NM_000941
 Red=Cloning site Green=Tags(s)

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MINMGDSHVDTSSVSEAVAEVSLFSMTDMILFSLIVGLLTYWFLFRKKKEEVPEFTKIQTLTSSVRES
SFVEKMKKTGRNIIVFYGSQTGTAEFANRLSKDAHRYGMRGMSADPEEYDLADLSSLPEIDNALVVF
CMATYGECDPTDNAQDFYDWLQETDVLGKVFVAVFGLGNKTYEHFNAMGKYVDKRLQLGAQRIFELGL
GD D DGNLEEDFITWREQFWLAVCEHFGVEATGEESSIRQYELVVHTDIDAAKVYMGEMGRLKSYENQ
PPFD AKNPFLAAVTTNRKLNQGTERHLMHLELDISDSKIRYESGDHVAVYPANDSALVNQLGKILGAD
LDVMS LNNLDEESNKKHPFPCTSYRTALTYLDTNPPRTNVL YELAQYASEPSEQELLRKMSSSSGEG
KELYL SWVVEARRHILAILQDCPSLRPPIDHLCCELLPRLQARYYSIASSSKVHPNSVHICAVVVEY
ETKAGRINK GVATNWLRAKEPVGNGRALVPMFVRKSQFRLPFKATTPVIMVGP GTGVAPF IGFI
QERAWLRQQGKEV GETLLYYGCRSDEDYL YREELAQFHRD GAL TQLNVAFSREQSHKVVYVQHLL
KQDREHLWKLIEGGAHIY VCGDARNMARDVQNTFYDIVAELGAMEHAQAVDYIKKLMTKGRYSLDV
WS
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000941

ORF Size: 2040 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_000941.1](#), [NP_000932.1](#)

RefSeq Size: 2509 bp

RefSeq ORF: 2043 bp

Locus ID: 5447

UniProt ID: [P16435](#)

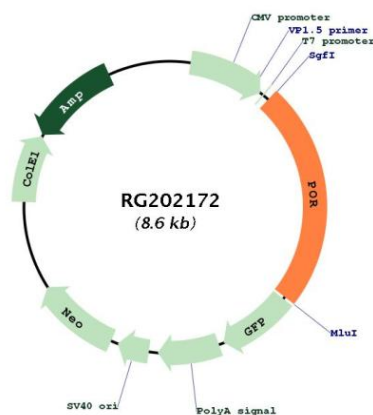
Cytogenetics: 7q11.23

Domains: flavodoxin, NAD_binding_1, FAD_binding_1

Protein Families: Druggable Genome, P450, Transmembrane

Gene Summary: This gene encodes an endoplasmic reticulum membrane oxidoreductase that is essential for multiple metabolic processes, including reactions catalyzed by cytochrome P450 proteins for metabolism of steroid hormones, drugs and xenobiotics. The encoded protein has a flavin adenine dinucleotide (FAD)-binding domain and a flavodoxin-like domain which bind two cofactors, FAD and FMN, that allow it to donate electrons directly from NADPH to all microsomal P450 enzymes. Mutations in this gene cause a complex set of disorders, including apparent combined P450C17 and P450C21 deficiency, amenorrhea and disordered steroidogenesis, congenital adrenal hyperplasia and Antley-Bixler syndrome, that resemble those caused by defects in steroid metabolizing enzymes such as aromatase, 21-hydroxylase, and 17 alpha-hydroxylase. [provided by RefSeq, Aug 2020]

Product images:



Circular map for RG202172

