

Product datasheet for RC205833

CYB5R1 (NM_016243) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CYB5R1 (NM_016243) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CYB5R1
Synonyms:	B5R.1; B5R1; B5R2; humb5R2; NQO3A2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC205833 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGATCCAGACGAGCCCCGTCCTGCTGGCCTCCCTGGGGTGGGGCTGGTCACTCTGCTCGGCCTGG
CTGTGGGCTCCTACTTGGTTCGGAGGTCCCGCCGGCCTCAGGTCCTCCTGGACCCCAATGAAAAGTA
CCTGCTACGACTGCTAGACAAGACGACTGTGAGCCACAACACCAAGAGGTTCCGCTTTCCTGCCACC
GCCACCACACTCTGGGCTGCCTGTGGCAAACATATCTACCTCTCCACCCGAATTGATGGCAGCCTGG
TCATCAGGCCATACACTCCTGTACCAGTGATGAGGATCAAGGCTATGTGGATCTTGTCATCAAGGTCTA
CCTGAAGGGTGTGACCCCAAATTTCTGAGGGAGGGAAGATGTCTCAGTACCTGGATAGCCTGAAGTT
GGGGATGTGGTGGAGTTTCGGGGCCAAGCGGGTTGCTCACTTACACTGGAAAAGGGCATTTTAACATTC
AGCCCAACAAGAAATCTCCACCAGAACCCCGAGTGGCGAAGAACTGGGAATGATTGCCGGCGGGACAGG
AATCACCCCAATGCTACAGCTGATCCGGGCCATCCTGAAAGTCCCTGAAGATCCAACCCAGTGCTTTCTG
CTTTTGGCAACCAGACAGAAAAGGATATCATCTTGGGGAGGACTTAGAGGAACTGCAGGCCCGCTATC
CCAATCGCTTTAAGCTCTGGTTCCTGATCATCCCCAAAAGATTGGGCCTACAGCAAGGGCTTTGT
GACTGCCGACATGATCCGGGAACACCTGCCCGCTCCAGGGGATGATGTGCTGGTACTGCTTTGTGGGCCA
CCCCAATGGTGCAGCTGGCCTGCCATCCCAACTTGGACAACTGGGCTACTCACAAAAGATGCGATTCA
CCTAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC205833 protein sequence
Red=Cloning site Green=Tags(s)

MGIQTSPVLLASLGVGLVTLGLAVGSYLVRRSRPQVTLDPNEKYLLRLLDKTTVSHNTKRFRFALPT
 AHHTLGLPVGKHIYLSTRIDGSLVIRPYTPVTSDEDQGYVDLVIKVYLKGVHPKFPEGGKMSOYLDSLKV
 GDVVEFRGSPGLLTYTGKGFNIQPNKSPPEPRVAKKLGMIAGGTGITPMLQLIRAILKVPEDPTQCFL
 LFANQTEKDIILREDLEELQARYPNRFKLWFTLDHPPKDWAYSKGFVTADMIREHLPAPGDDVLVLLCGP
 PPMVQLACHPNLDKLGYSQKMRFTY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6064_b11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_016243

ORF Size: 915 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_016243.3](#)

RefSeq Size: 1675 bp

RefSeq ORF: 918 bp

Locus ID: 51706

UniProt ID: [Q9UHQ9](#)

Cytogenetics: 1q32.1

Domains: NAD_binding_1, FAD_binding_6

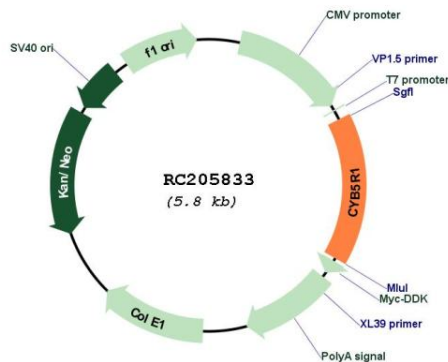
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Amino sugar and nucleotide sugar metabolism

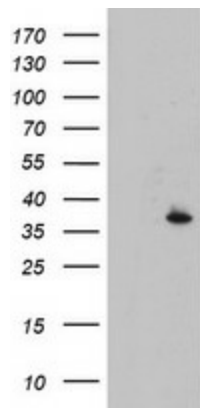
MW: 34.1 kDa

Gene Summary: NADH-cytochrome b5 reductases are involved in desaturation and elongation of fatty acids, cholesterol biosynthesis, drug metabolism, and, in erythrocyte, methemoglobin reduction. [UniProtKB/Swiss-Prot Function]

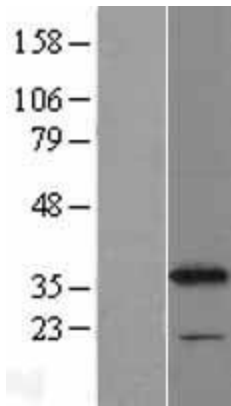
Product images:



Circular map for RC205833



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CYB5R1 (Cat# RC205833, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CYB5R1 (Cat# [TA504564]). Positive lysates [LY402525] (100ug) and [LC402525] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402525]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205833 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYB5R1 protein (Cat# [TP305833]). The protein was produced from HEK293T cells transfected with CYB5R1 cDNA clone (Cat# RC205833) using MegaTran 2.0 (Cat# [TT210002]).