OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC203237

FMO2 (NM_001460) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FMO2 (NM_001460) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	FMO2
Synonyms:	FMO1B1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

This product is to be used for laboratory only. Not for diagnostic or therapeutic use.
©2023 OriGene Technologies, Inc., 9620 Medical Center Drive, Ste 200, Rockville, MD 20850, US

ORF Nucleotide Sequence:

>RC203237 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAAAGAAGGTAGCTGTGATTGGAGCTGGGGTCAGTGGCCTAATTTCTCTGAAGTGCTGTGTGGATG
AGGGACTTGAGCCCACTTGCTTTGAGAGAACTGAAGATATTGGAGGAGTGTGGAGGTTCAAAGAGAATGT
GGAAGATGGCCGAGCAAGTATCTATCAATCTGTCGTTACCAACACCAGCAAAGAAATGTCCTGTTTCAGT
GACTTTCCAATGCCTGAAGATTTTCCAAACTTCCTGCATAATTCTAAACTTCTGGAATATTTCAGGATTT
TTGCTAAAAAATTTGATCTGCTAAAATATATTCAGTTCCAGACAACTGTCCTTAGTGTGAGAAAATGTCC
AGATTTCTCATCCTCTGGCCAATGGAAGGTTGTCACTCAGAGCAACGGCAAGGAGCAGAGTGCTGTCTTT
GACGCAGTTATGGTTTGCAGTGGCCACCACATTCTACCTCATATCCCACTGAAGTCATTTCCAGGTATGG
AGAGGTTCAAAGGCCAATATTTCCATAGCCGCCAATACAAGCATCCAGATGGATTTGAGGGAAAACGCAT
CCTGGTGATTGGAATGGGAAACTCAGGCTCAGATATTGCTGTTGAGCTGAGTAAGAATGCTGCTCAGGTT
TTTATCAGCACCAGGCATGGCACCTGGGTCATGAGCCGTATCTCTGAAGATGGCTATCCTTGGGACTCAG
TGTTCCACACCCGGTTTCGTTCTATGCTCCGCAATGTACTGCCACGAACAGCTGTAAAATGGATGATAGA
ACAACAGATGAATCGGTGGTTCAACCATGAAAATTATGGCCTTGAGCCTCAAAACAAATACATTATGAAG
GAACCTGTACTAAATGATGATGTCCCAAGTCGTCTACTCTGTGGAGCCATCAAGGTGAAATCTACAGTGA
AAGAGCTCACAGAAACTTCTGCCATCTTTGAGGATGGAACAGTGGAGGAGAACATTGATGTCATCATTTT
TGCAACAGGATATAGTTTCTCTTTTCCCTTCCTTGAAGATTCACTCGTTAAAGTAGAGAATAATATGGTC
TCACTGTATAAATACATATTCCCCGCTCACCTGGACAAGTCAACCCTCGCGTGCATTGGTCTCATCCAGC
CCCTAGGTTCCATTTTCCCAACTGCTGAACTTCAAGCTCGTTGGGTGACAAGAGTTTTCAAAGGCTTGTG
TAGCCTGCCCTCAGAGAGAACTATGATGATGGACATTATCAAAAGGAATGAAAAAAGAATTGACCTGTTT
GGAGAAAGCCAGAGCCAGACGTTGCAGACCAATTATGTTGACTACTTGGACGAGCTCGCCTTAGAGATAG
GTGCGAAGCCAGATTTCTGCTCTCTCTTGTTCAAAGATCCTAAACTGGCTGTGAGACTCTATTTCGGACC
CTGCAACTCCTAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203237 protein sequence
Red=Cloning site Green=Tags(s)

MAKKVAVIGAGVSGLISLKCCVDEGLEPTCFERTEDIGGVWRFKENVEDGRASIYQSVVTNTSKEMSCFS
DFPMPEDFPNFLHNSKLLEYFRIFAKKFDLLKYIQFQTTVLSVRKCPDFSSSGQWKVVTQSNGKEQSAVF
DAVMVCSGHHILPHIPLKSFPGMERFKGQYFHSRQYKHPDGFEGKRILVIGMGNSGSDIAVELSKNAAQV
FISTRHGTWVMSRISEDGYPWDSVFHTRFRSMLRNVLPRTAVKWMIEQQMNRWFNHENYGLEPQNKYIMK
EPVLNDDVPSRLLCGAIKVKSTVKELTETSAIFEDGTVEENIDVIIFATGYSFSFPFLEDSLVKVENNMV
SLYKYIFPAHLDKSTLACIGLIQPLGSIFPTAELQARWVTRVFKGLCSLPSERTMMMDIIKRNEKRIDLF
GESQSQTLQTNYVDYLDELALEIGAKPDFCSLLFKDPKLAVRLYFGPCNSY

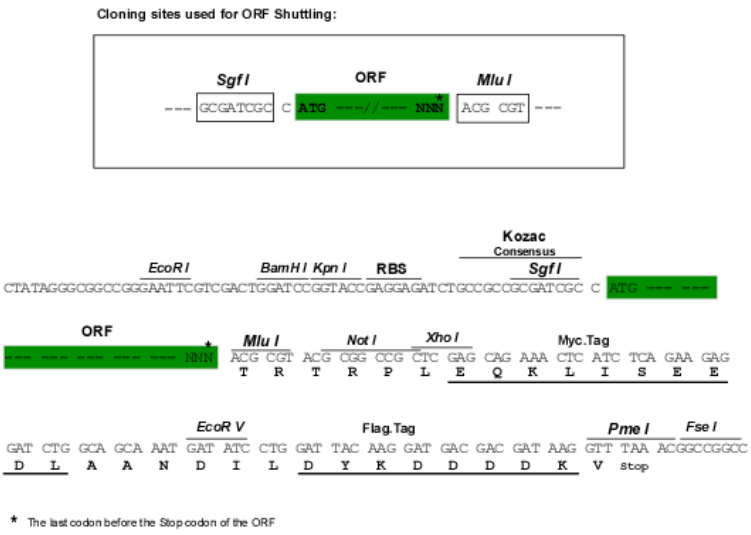
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6152_h06.zip

Restriction Sites: SgfI-MluI

This product is to be used for laboratory only. Not for diagnostic or therapeutic use.
©2023 OriGene Technologies, Inc., 9620 Medical Center Drive, Ste 200, Rockville, MD 20850, US

Cloning Scheme:



ACCN: NM_001460

ORF Size: 1413 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_001460.3

RefSeq Size: 5304 bp

RefSeq ORF: 1608 bp

Locus ID: 2327

UniProt ID: Q99518

Cytogenetics: 1q24.3

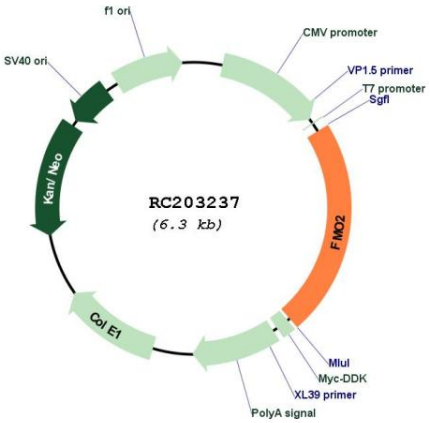
This product is to be used for laboratory only. Not for diagnostic or therapeutic use.
©2023 OriGene Technologies, Inc., 9620 Medical Center Drive, Ste 200, Rockville, MD 20850, US

Protein Pathways: Drug metabolism - cytochrome P450

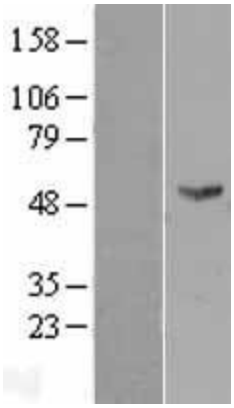
MW: 53.6 kDa

Gene Summary: This gene encodes a flavin-containing monooxygenase family member. It is an NADPH-dependent enzyme that catalyzes the N-oxidation of some primary alkylamines through an N-hydroxylamine intermediate. However, some human populations contain an allele (FMO2*2A) with a premature stop codon, resulting in a protein that is C-terminally-truncated, has no catalytic activity, and is likely degraded rapidly. This gene is found in a cluster with other related family members on chromosome 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2014]

Product images:

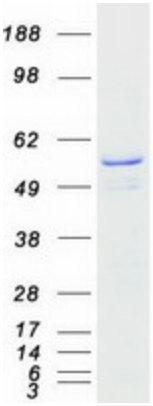


Circular map for RC203237



Western blot validation of overexpression lysate (Cat# [LY400568]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203237 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

This product is to be used for laboratory only. Not for diagnostic or therapeutic use.
©2023 OriGene Technologies, Inc., 9620 Medical Center Drive, Ste 200, Rockville, MD 20850, US



Coomassie blue staining of purified FMO2 protein (Cat# [TP303237]). The protein was produced from HEK293T cells transfected with FMO2 cDNA clone (Cat# RC203237) using MegaTran 2.0 (Cat# [TT210002]).

This product is to be used for laboratory only. Not for diagnostic or therapeutic use.
©2023 OriGene Technologies, Inc., 9620 Medical Center Drive, Ste 200, Rockville, MD 20850, US