

Product datasheet for **RC206506**

FMO3 (NM_006894) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FMO3 (NM_006894) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	FMO3
Synonyms:	dj127D3.1; FMOII; TMAU
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC206506 representing NM_006894
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGAAGAAAGTGCCATCATTGGAGCTGGTGTGAGTGGCTTGGCCTCCATCAGGAGCTGTCTGGAAG
 AGGGGCTGGAGCCACCTGCTTTGAGAAGAGCAATGACATTGGGGCCTGTGAAATTTTCAGACCATGC
 AGAGGAGGGCAGGGCTAGCATTTACAAATCAGTCTTTTCCAACCTTTCCAAAGAGATGATGTGTTCCCA
 GACTTCCCATTTCCCGATGACTTCCCAACTTTATGCACAACAGCAAGATCCAGGAATATATCATTGCAT
 TTGCCAAAGAAAAGAACCTCCTGAAGTACATACAATTTAAGACATTTGTATCCAGTGAAATAAACATCC
 TGATTTTGCAACTACTGGCCAGTGGGATGTTACCACTGAAAGGGATGGTAAAAAAGAAATCGGCTGTCTTT
 GATGCTGTAATGGTTTGTCCGGACATCATGTGTATCCCAACCTACCAAAAGAGTCTTTCCAGGACTAA
 ACCACTTTAAAGGCAAATGCTTCCACAGCAGGGACTATAAAGAACCAGGTGATTCAATGAAAGCGTGT
 CCTGGTGGTTGGCCTGGGGAATTCGGGCTGTGATATTGCCACAGAAGTCCAGCCGACAGCAGAACAGGTC
 ATGATCAGTTCAGAAAGTGGCTCCTGGGTGATGAGCCGGTCTGGGACAATGGTTATCCTGGGACATGC
 TGCTCGTCACTCGATTTGGAACCTTCTCAAGAACAATTTACCGACAGCCATCTCTGACTGGTTGTACAT
 GAAGCAGATGAATGCAAGATTCAAGCATGAAAATATGGCTTGATGCCTTTAAATGGAGTCTGAGGAAA
 GAGCCTGTATTTAACGATGAGCTCCAGCAAGCATTCTGTGTGGCATTGTGTCCGTAAAGCCTAACGTGA
 AGGAATTCACAGAGACCTCGGCCATTTTGGAGGATGGGACCATATTTGAGGGCATTGACTGTGTAATCTT
 TGCAACAGGGTATAGTTTGCCTACCCCTTCTTGATGAGTCTATCATCAAAAGCAGAAAACATGAGATC
 ATTTTATTTAAAGGAGTATTTCTCTCTACTTGAGAAGTCAACCATAGCAGTATTGGCTTTGTCCAGT
 CCCTTGGGGCTGCCATTTCCACAGTTGACCTCCAGTCCCGCTGGGCAGCACAAGTAAATAAGGGAACTTG
 TACTTTGCCTTCTATGGAAGACATGATGAATGATTAATGAGAAAATGGAGAAAAAGCGCAAATGGTTT
 GGCAAAAGCGAGACCATACAGACAGATTACATTGTTTATATGGATGAACTCTCCTCCTTATTGGGGCAA
 AGCCCAACATCCCATGGCTGTTTCTCACAGATCCCAAATGGCCATGGAAGTTTATTTTGGCCCTTGAG
 TCCCTACCAGTTTAGGCTGGTGGGCCAGGGCAGTGGCCAGGAGCCAGAAATGCCATACTGACCCAGTGG
 GACCGGTCTTGAACCCATGCAGACACGAGTGGTGGGAGACTTCAGAAGCCTTGCTTCTTTTCCATT
 GGCTGAAGCTCTTGAATTCCTATTCTGTTAATCGCTGTTTTCTTGTGTTGACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206506 representing NM_006894
 Red=Cloning site Green=Tags(s)

MGKKVAIIGAGVSGLASIRSCLEEGLEPTCFEKSNDIGGLWKFSDHAEGRASIYKSVFSNSKEMMCFP
 DFPFPDDFPNFMHNSKIQEYIIAFAKEKLLKYIQFKTFVSSVNKHPDFATTGQWDVTTTERDGKKE SAVF
 DAVMVC SGHHVYPNL PKE SFPGLNHF KGC FHSRDYKEP GVFNGKRVL VVGLGNSGCDIATEL SRTAEQV
 MISSRSGSWMSRVWDNGYPWDMLLVTRFGTFLKNNLPTAISDWLYMKQMNARFKHENYGLMPLNGVLRK
 EPVFNDEL PASILCGIVSVKPNVKEFTETSAIFEDGTIFEGIDCVIFATGYSFAYPFLDESI IKS RNNEI
 ILFKGVFPPLLEKSTIAVIGFVQSLGAAIPTVDLQSRWAAQVIKGTCTLPSMEDMMNDINEKMEKKRWF
 GKSETIQTDYIVYMDLSSFIGAKPNIPWFL TDPKLAMEVYFGPCSPYQFRLVGPQWPGARNAILTQW
 DRSLKPMQTRVVGRLQKPCFFFHWLKLF AIPILLIAVFLVLT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8001_f02.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_006894

ORF Size: 1596 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_006894.3](#)

RefSeq Size: 2053 bp

RefSeq ORF: 1599 bp

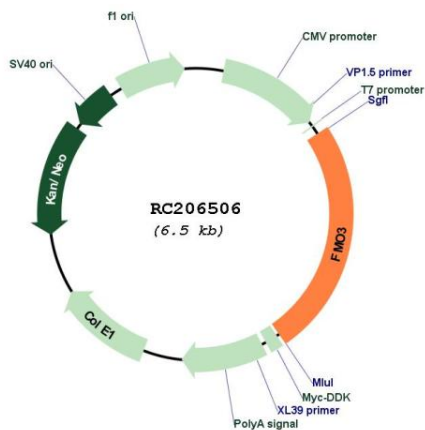
Locus ID: 2328

UniProt ID: [P31513](#)

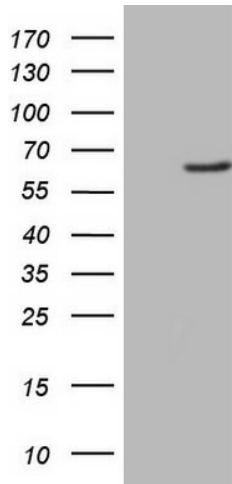
Cytogenetics: 1q24.3

Domains:	FMO-like
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Drug metabolism - cytochrome P450
MW:	59.9 kDa
Gene Summary:	<p>Flavin-containing monooxygenases (FMO) are an important class of drug-metabolizing enzymes that catalyze the NADPH-dependent oxygenation of various nitrogen-, sulfur-, and phosphorous-containing xenobiotics such as therapeutic drugs, dietary compounds, pesticides, and other foreign compounds. The human FMO gene family is composed of 5 genes and multiple pseudogenes. FMO members have distinct developmental- and tissue-specific expression patterns. The expression of this FMO3 gene, the major FMO expressed in adult liver, can vary up to 20-fold between individuals. This inter-individual variation in FMO3 expression levels is likely to have significant effects on the rate at which xenobiotics are metabolised and, therefore, is of considerable interest to the pharmaceutical industry. This transmembrane protein localizes to the endoplasmic reticulum of many tissues. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms. Mutations in this gene cause the disorder trimethylaminuria (TMAU) which is characterized by the accumulation and excretion of unmetabolized trimethylamine and a distinctive body odor. In healthy individuals, trimethylamine is primarily converted to the non odorous trimethylamine N-oxide.[provided by RefSeq, Jan 2016]</p>

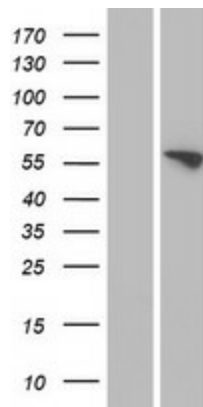
Product images:



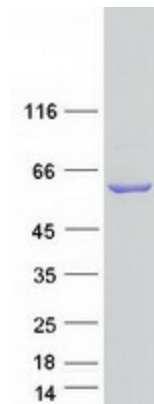
Circular map for RC206506



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY FMO3 (Cat# RC206506, 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-FMO3 (Cat# [TA808310])(1:2000). Positive lysates [LY416335] (100ug) and [LC416335] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424145]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC212376] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified FMO3 protein (Cat# [TP306506]). The protein was produced from HEK293T cells transfected with FMO3 cDNA clone (Cat# RC206506) using MegaTran 2.0 (Cat# [TT210002]).