

## Product datasheet for **SC122615**

### Flavin containing monooxygenase 4 (FMO4) (NM\_002022) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Flavin containing monooxygenase 4 (FMO4) (NM_002022) Human Untagged Clone
Tag:	Tag Free
Symbol:	Flavin containing monooxygenase 4
Synonyms:	FMO2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**Fully Sequenced ORF:**

```

>OriGene sequence for NM_002022 edited
AGAAAAGACGAATGGCTTTTGTAACTGAGGGCACTTTTACAAAAGTCATCTTTCCA
TTTATTTTTCTTTAGAAAAAAGAAATTTGGGTTTTGAGCTTTTTTAAAAAAAAGACAA
ACACTTTCCTTGACTTTGAGAAATAATTAAGTCAAAGAAATCTGCTCTATGCTAACCAAG
AGATAGAGCACAGCAAAGATCTGCCAGCCCCAGGCCTCTACCTAGTGGCCTGGAAATTCA
AGTATTTCTATTGGTGGAGGCCATTTGTTTCTGATTAGAAGCTGTCTAAACCTCCTACTC
CTCAACTCAAAGGAAAAACACAGAGCATACCATGGCCAAGAAAGTTGCAGTGATTGGAGCT
GGTGTGAGTGGCCTCTCCTCCATCAAATGCTGTGTGGATGAGGACCTGGAGCCCACCTGC
TTTGAGAGAAGTGATGACATTGGGGATTATGGAAGTTTACTGAATCTTCCAAAGATGGG
ATGACCAGGGTCTATAAGTCATTAGTGACAAATGTCTGTAAGGAAATGTCATGTTACAGT
GACTTCCCTTTCCACGAAGATTATCCTAATTTTCAAGCCATGAAAAATTTGGGACTAT
CTCCAAGAATTTGCTGAGCACTTTGACCTCCTGAAATACATTAGTTTAAAGCCACTGTG
TGCAGCATAACGAAGCGTCCAGACTTCTCCGAACTGGTCAGTGGGATGTTGTCACAGAG
ACAGAGGGCAAGCAAAAATAGAGCTGTCTTTGATGCTGTTATGGTTTGCAGTGGACATTC
CTGAATCCCCATTACCTTTGGAAGCCTTCTCCTGGAATCATAAGTTTAAAGTCCAGATC
CTGCATAGTCAAGAGTACAAGATCCCAGAAGGCTTTTCCAGGGCAAACGCGTCTTGGTGATT
GGTCTTGGGAACACTGGAGGAGACATTGCTGTGGAACCTAGTCCGAAACGGCAGCTCAGGTA
CTTCTCAGTACTAGAAGTGGTACCTGGGTTCTTGGGCGCTCTTCCAGATTGGGGCTATCCT
TATAATATGATGGTTACAAGAAGATGCTGTAGTTTTATTGCACAAGTTCTGCCTTACAGT
TTTCTAAACTGGATTCAAGAAAGGAAGTTGAATAAGAGATTTAATCATGAGGATTATGGA
TTAAGTATTACCAAGGGAAAAAGCAAATTCATTGTGAATGATGAGCTGCCAAACTGT
ATCCTCTGTGGGCAATCACTATGAAAACACAGCGTATTGAATTTACAGAAAACCTCTGCT
GTCTTTGAAGATGGGACAGTGGAAAGAAAACATTGATGTTGTGATCTTCACTACAGGATAT
ACATTTTCTTTTCCATTTTTTGAAGAACCCTTAAAAGCCTCTGTACAAAGAAAGATATTT
CTATACAAGCAAGTCTTTCCCTTAAACCTAGAGAGAGCGACATTAGCCATCATCGGCCTT
ATCGGCCTTAAAGGATCCATCTTATCAGGCACAGAGCTCCAAGCACGATGGGTACAAAGA
GTATTCAAAGGACTCTGTAAGATACCTCCATCCCAAAAATTTGATGATGGAGGCTACTGAA
AAGGAACAGCTCATTAAAAGGGGAGTGTTTAAAGACACCAGCAAAGACAAATTTGACTAC
ATTGCCTACATGGATGATATCGCTGCCTGCATAGGCACAAAGCCCAGCATCCCCTTCTG
TTCCTCAAGGATCCAGACTAGCTTGGGAAGTTTTCTTTGGACCATGTACTCCTTATCAG
TACCGCCTCATGGGCCCTGGAAAATGGGATGGAGCCAGAATGCCATCCTGACCCAGTGG
GACAGAACATTGAAACCTTTAAAAACTCGAATTGTCCCTGATTCTCCAAGCCTGCCTCC
ATGTCACATTATTTAAAAGCCTGGGGGGCACCTGTCTACTTGCCTCTCTTACTTATC
TGTAATCTTCACTTTTCTTGAATTTGGTGGAGAGATAAACTACAGGACAGAAATGTCCTT
TACCTAGTAAAGTCTTTGGCGAGGATGAACCTGATTGTTACAAGGGTTACACAAAGTCATG
CTAATTCATCTCCAAGTATCTTGTGCATCCCTCCTCTGCTCTCCATCATAACTGCTATT
AGCCAAATTCAGGCCAGTCATCTCCTATCTGAATTTATGTATTATCTTCTTCTTTGTTT
TCAGTACCCTCTTTCTTCCACCCTTTCCAATGCATCTTCTACCCTGCTACCTCAGTGAT
TATTCTAAAATAAATATATATGATATGGTTTAAAAAAAAAAAAAAAAAAAAA
    
```

<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_002022 unedited NNNGGCGGTTTCGCATTTGTATACGACTCATATAGGGCGGCCGGAATTCGCACGAGCAGA AAAGACGAATGGCTTTTGTAAAACTGAGGGCACTTTTACAAAAAGTCATCTTTCCATTT ATTTTTCTTTAGAAAAAAGAAATTTGGGTTTTGAGCTTTTTAAAAAAGACAAACA CTTTCCTTGACTTTGAGAAATAATTTAAGTCAAAGAATCTGCTCTATGCTAACCAAGAGA TAGAGCACAGCAAAGATCTGCCAGCCCCAGGCCTCTACCTAGTGGCCTGGAAATCAAGT ATTCTTATTGGTGGAGGCCATTTGTTTCTGATTAGAAGCTGTCTAAACCTCCTACTCCTC AACTCAAAGGAAAACACAGAGCATACCATGGCCAAGAAAGTTGCAGTGATTGGAGCTGGT GTGAGTGGCCTCTCCTCCATCAAATGCTGTGTGGATGAGGACCTGGAGCCACCTGCTTT GAGAGAAGTGATGACATTGGGGATTATGGAAGTTTACTGAATCTTCAAAGATGGGATG ACCAGGGTCTATAAGTCATTAGTGACAAATGTCTGTAAGGAAATGTCATGTTACAGTGAC TTCCCTTTCCACGAAGATTATCCTAATTTTCATGAACCATGAAAAATTTGGGACTATCTC CAAGAATTTGCTGAGCACTTTGACCTCCTGAAATACATTCAGTTAAGACCACTGTGTGC AGCATAACGAAGCGTCCAGACTTCTCCGANACTGGTCAGTGGGATGTTGTCACAGAGACA GAGGGCAAGCAAATAGAGCTGTCTTTGATGCTGTTATGGTTTGCCTGGACATTTCTCTG AATCCNCATTTACCTTTGGAAGCCTTNNCTGGGANNTCATAAGTTAAA
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_002022
<b>Insert Size:</b>	2279 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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_002022.1</a> , <a href="#">NP_002013.1</a>
<b>RefSeq Size:</b>	2148 bp
<b>RefSeq ORF:</b>	1677 bp
<b>Locus ID:</b>	2329
<b>UniProt ID:</b>	<a href="#">P31512</a>
<b>Cytogenetics:</b>	1q24.3
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450

**Gene Summary:**

Metabolic N-oxidation of diet-derived amino-trimethylamine (TMA) is mediated by flavin-containing monooxygenase and is subject to an inherited FMO3 polymorphism in man. This results in a small subpopulation with reduced TMA N-oxidation capacity and causes fish odor syndrome (Trimethylaminuria). Three forms of the enzyme are encoded by genes clustered in the 1q23-q25 region. Flavin-containing monooxygenases are NADPH-dependent flavoenzymes that catalyzes the oxidation of soft nucleophilic heteroatom centers in drugs, pesticides, and xenobiotics. [provided by RefSeq, Jan 2015]