

## Product datasheet for **RC401075**

### Epoxide hydrolase (EPHX1) (NM\_000120) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	Epoxide hydrolase (EPHX1) (NM_000120) Human Mutant ORF Clone
Mutation Description:	Y113H
Affected Codon#:	113
Affected NT#:	337
Nucleotide Mutation:	EPHX1 Mutant (Y113H), Myc-DDK-tagged ORF clone of Homo sapiens epoxide hydrolase 1, microsomal (xenobiotic) (EPHX1), transcript variant 1 as transfection-ready DNA
Effect:	Epoxide hydrolase deficiency, ssoiion wih
Symbol:	EPHX1
Synonyms:	EPHX; EPOX; HYL1; MEH
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000120
ORF Size:	1365 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC401075 representing NM\_000120  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTGGCTAGAAATCCTCCTCACTTCAGTGCTGGGCTTTGCCATCTACTGGTTCACTCCCGGGACAAG  
 AGGAAACTTTGCCACTTGAAGATGGGTGGTGGGGCCAGGCACGAGTCCGCAGCCAGGGAGGACGACAG  
 CATCCGCCCTTTCAAGGTGGAACGTCAGATGAGGAGATCCACGACTTACACCAGAGGATCGATAAGTTC  
 CGTTTACCCACCTTTGGAGGACAGCTGCTTCCACTATGGTTCAACTCCAACCTACCTGAAGAAAGTCA  
 TCTCTACTGGCGGAATGAATTTGACTGGAAGAAGCAGGTGGAGATTCTCAACAGACACCCTCACTTCAA  
 GACTAAGATTGAAGGGCTGGACATCCACTTCATCCACGTGAAGCCCCCAGCTGCCCGAGGCCATAACC  
 CCGAAGCCCTTGCTGATGGTGCACGGCTGGCCCGCTCTTCTACGATTTTATAAGATCATCCACTCC  
 TGACTGACCCCAAGAACCATGGCCTGAGCGATGAGCACGTTTTTGAAGTCATCTGCCCTCCATCCCTGG  
 CTATGGCTTCTCAGAGGCATCCTCCAAGAAGGGTTCAACTCGGTGGCCACCGCCAGGATCTTTTACAAG  
 CTGATGCTGCGGCTGGGCTTCCAGGAATTCACATTCAAGGAGGGGACTGGGGTCCCTGATCTGCACTA  
 ATATGGCCCAGCTGGTGCCAGCCACGTGAAAGGCCTGCACTTGAACATGGCTTTGGTTTTAAGCAACT  
 CTCTACCCTGACCCTCCTCCTGGGACAGCGTTTCGGGAGGTTTCTTGGCCTCACTGAGAGGGATGTGGAG  
 CTGCTGTACCCCGTCAAGGAGAAGGTATTCTACAGCCTGATGAGGGAGAGCGGCTACATGCACATCCAGT  
 GCACCAAGCCTGACACCGTAGGCTCTGCTCTGAATGACTCTCCTGTGGTCTGGCTGCCTATATTCTAGA  
 GAAGTTTTCCACTGGACCAATACGGAATCCGATACCTGGAGGATGGAGGCTGGAAAGGAAGTTCTCC  
 CTGGACGACCTGCTGACCAACGTCATGCTCTACTGGACAACAGGCACCATCATCTCCTCCAGCGCTTCT  
 ACAAGGAGAACCTGGACAGGGCTGGATGACCAGAAGCATGAGCGGATGAAGGTCTATGTGCCACTGG  
 CTTCTCTGCCTTCCCTTTTGGCTATTGCACACGCTGAAAAGTGGGTGAGGTTCAAGTACCCAAAGCTC  
 ATCTCCTATTCTACATGGTTCTGGGGCCACTTTGGCGCTTTGAGGAGCCGAGCTGCTCGCCAGG  
 ACATCCGCAAGTCTGTGGTCTGGAGCGGCAA

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC401075 representing NM\_000120  
 Red=Cloning site Green=Tags(s)

MWLEILLTSVLGFAIYWFISRDKETLPLEDGWWPGTRSAAREDDSIKPFKETSDEEIHDLHQRIDKF  
 RFTPLEDSCFHYGFNSNYLKKVISYWRNEFDWKKQVEILNRHPHFKTKIEGLDIHF IHVKKPQLPAGHT  
 PKPLLMVHGWPGSFYEFYKIIPLLTDPKNHGLSDEHVFEVICPSIPGYGFSEASSKKGFNSVATARIFYK  
 LMLRLGFQEFYIQGGDWGSLICTNMAQLVPSHVKGLHLNMLVLSNFSTLTLLGQRFGRFLGLTERDVE  
 LLYPVKEKVFYSLMRESGYMHIQCTKPDVGSALNDSPVGLAAYILEKFTWTNTEFRYLEDGGLERKFS  
 LDDLLTNVMLYWTTGTIISSQRFYKENLGQGWMTQKHERMKVYVPTGFSAFPPELLHTPEKWVRFKYPKL  
 ISYSYMRGGHFAAFEEPELLAQDIRKFLSVLERQ

**SGP**TRTRRLE**QKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**OTI Disclaimer:**

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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).

**RefSeq:**

[NP\\_000111](#)

**RefSeq Size:**

1365 bp

**RefSeq ORF:**

1368 bp

**Locus ID:**

2052

**Cytogenetics:**

1q42.12

**Domains:**

abhydrolase

**Protein Families:**

Druggable Genome, Protease

**Protein Pathways:**

Metabolism of xenobiotics by cytochrome P450

**MW:** 50.1 kDa

**Gene Summary:** Epoxide hydrolase is a critical biotransformation enzyme that converts epoxides from the degradation of aromatic compounds to trans-dihydrodiols which can be conjugated and excreted from the body. Epoxide hydrolase functions in both the activation and detoxification of epoxides. Mutations in this gene cause preeclampsia, epoxide hydrolase deficiency or increased epoxide hydrolase activity. Alternatively spliced transcript variants encoding the same protein have been found for this gene.[provided by RefSeq, Dec 2008]