

## Product datasheet for **RC225453**

### Heme oxygenase 2 (HMOX2) (NM\_001127206) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Heme oxygenase 2 (HMOX2) (NM_001127206) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Heme oxygenase 2
Synonyms:	HO-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC225453 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGTCAGCGGAAGTGAAACCTCAGAGGGGTAGACGAGTCAGAAAAAAGAACTCTGGGGCCCTAGAAA  
AGGAGAACCAAATGAGAATGGCTGACCTCTCGGAGCTCCTGAAGGAAGGGACCAAGGAAGCACACGACCG  
GGCAGAAAACACCCAGTTTGTCAAGGACTTCTTGAAAGGCAACATTAAGAAGGAGCTGTTTAAGCTGGCC  
ACCACGGCACTTTACTTCACATACTCAGCCCTCGAGGAGGAAATGGAGCGCAACAAGGACCATCCAGCCT  
TTGCCCTTTGTACTTCCCCATGGAGCTGCACCGAAGGAGGCGCTGACCAAGGACATGGAGTATTTCTT  
TGGTGAAAACCTGGGAGGAGCAGGTGCAGTGCCCAAGGCTGCCAGAAAGTACGTGGAGCGGATCCACTAC  
ATAGGGCAGAACGAGCCGGAGCTACTGGTGGCCCATGCATACACCCGCTACATGGGGATCTCTCGGGGG  
GCCAGGTGCTGAAGAAGGTGGCCAGCGAGCACTGAAACTCCCCAGCACAGGGGAAGGGACCCAGTTCTA  
CCTGTTTGAGAAATGTGGACAATGCCAGCAGTTCAAGCAGCTCTACCGGGCCAGGATGAACGCCCTGGAC  
CTGAACATGAAGACCAAGAGAGGATCGTGGAGGAGGCCAACAAGGCTTTTGAGTATAACATGCAGATAT  
TCAATGAACTGGACCAGGCCGGCTCCACTGGCCAGAGAGACCTTGGAGGATGGGTTCCCTGTACACGA  
TGGGAAAGGAGACATGCGTAAATGCCCTTCTACGCTGCTGAACAAGACAAGGTGCCCTGGAGGGCAGC  
AGCTGTCCCTCCGAACAGCTATGGCTGTGCTGAGGAAGCCAGCCTCCAGTTCATCCTGGCCGCTGGTG  
TGCCCTAGCTGCTGGACTCTTGGCCTGGTACTACATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC225453 protein sequence  
Red=Cloning site Green=Tags(s)

MSAEVETSEGVDSEKKNNGALEKENQMRMADLSELLKEGTKEAHDRAENTQFVKDFLKGNIKKELFKLA  
 TTALYFTYSALEEMERNKDHPAFAPLYFPMELHRKEALTKDMEYFFGENWEEQVQCPKAAQKYVERIHY  
 IGQNEPELLVAHAYTRYMGDLGGQVLKKVAQRALKLPSTGEGTQFYLFENVDNAQQFKQLYRARMNALD  
 LNMKTKERIVEEANKAFEYNMQIFNELDQAGSTLARETLEDGFPVHDGKGDMRKCPFYAAEQDKGALEGS  
 SCPFRTAMAVLRKPSLQFILAAGVALAAGLLAWYYM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8075\\_h08.zip](https://cdn.origene.com/chromatograms/mk8075_h08.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\_001127206

**ORF Size:** 948 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\\_001127206.2](#)

**RefSeq Size:** 1751 bp

**RefSeq ORF:** 951 bp

**Locus ID:** 3163

**UniProt ID:** [P30519](#)

**Cytogenetics:** 16p13.3

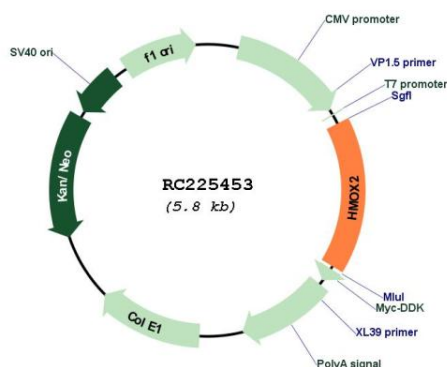
**Protein Families:** Transmembrane

**Protein Pathways:** Porphyrin and chlorophyll metabolism

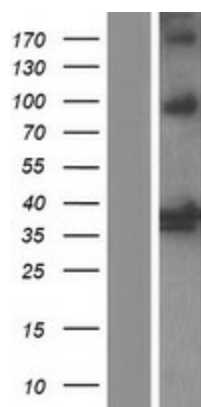
**MW:** 36 kDa

**Gene Summary:** Heme oxygenase, an essential enzyme in heme catabolism, cleaves heme to form biliverdin, which is subsequently converted to bilirubin by biliverdin reductase, and carbon monoxide, a putative neurotransmitter. Heme oxygenase activity is induced by its substrate heme and by various nonheme substances. Heme oxygenase occurs as 2 isozymes, an inducible heme oxygenase-1 and a constitutive heme oxygenase-2. HMOX1 and HMOX2 belong to the heme oxygenase family. Several alternatively spliced transcript variants encoding three different isoforms have been found for this gene. [provided by RefSeq, Oct 2013]

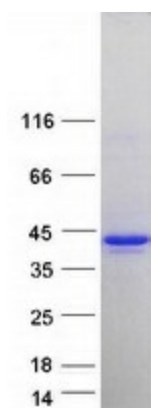
## Product images:



Circular map for RC225453



Western blot validation of overexpression lysate (Cat# [LY426709]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225453 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HMOX2 protein (Cat# [TP325453]). The protein was produced from HEK293T cells transfected with HMOX2 cDNA clone (Cat# RC225453) using MegaTran 2.0 (Cat# [TT210002]).