

## Product datasheet for **RC200463**

### Heme Oxygenase 1 (HMOX1) (NM\_002133) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Heme Oxygenase 1 (HMOX1) (NM_002133) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Heme Oxygenase 1
Synonyms:	bK286B10; HMOX1D; HO-1; HSP32
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200463 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGCGTCCGCAACCCGACAGCATGCCCCAGGATTTGTCAGAGGCCCTGAAGGAGGCCACCAAGGAGG  
TGCACACCCAGGCAGAGAATGCTGAGTTCATGAGGAACTTTCAGAAGGGCCAGGTGACCCGAGACGGCTT  
CAAGCTGGTGATGGCCTCCCTGTACCACATCTATGTGGCCCTGGAGGAGGAGATTGAGCGCAACAAGGAG  
AGCCAGTCTTCGCCCTGTCTACTTCCCAGAAGAGCTGCACCGCAAGGCTGCCCTGGAGCAGGACCTGG  
CCTTCTGGTACGGGCCCGCTGGCAGGAGTGCATCCCCTACACACCAGCCATGCAGCACTATGTGAAGCG  
GCTCCACGAGGTGGGGCGCACAGAGCCCGAGCTGCTGGTGGCCACGCCTACACCCGCTACCTGGGTGAC  
CTGTCTGGGGCCAGGTGCTCAAAAAGATTGCCAGAAAGCCCTGGACCTGCCAGCTCTGGCGAGGGCC  
TGGCCTTCTTACCTTCCCAACATTGCCAGTGCCACCAAGTTCAAGCAGCTCTACCGCTCCCGCATGAA  
CTCCCTGGAGATGACTCCCGCAGTCAGGCAGAGGGTGATAGAAGAGGCCAAGACTGCGTTCTGTCAAC  
ATCCAGCTCTTTGAGGAGTTGCAGGAGCTGCTGACCCATGACACCAAGGACCAGAGCCCCACAGGGGAC  
CAGGGCTTCGCCAGCGGGCCAGCAACAAAGTGAAGATTCTGCCCCGTGGAGACTCCCAGAGGGAAGCC  
CCCCTCAACACCCGCTCCCAGGCTCCGCTTCTCCGATGGGTCTTACACTCAGCTTTCTGGTGGCGACA  
GTTGCTGTAGGGCTTTATGCCATG

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC200463 protein sequence  
Red=Cloning site Green=Tags(s)

MERPQDSMPQDLSEALKEATKEVHTQAENAEMRNQKGVTRDGFKLVMSLYHIYVALEEEIERNKE  
SPVAFVYFPEELHRKAALEQDLAFWYGPWRQEVIPYTPAMQHYVKRLHEVGRTEPELLVAHAYTRYLGD  
LSSGQVLKQKALDLPSSGEGLAFFTFPNIASATKFKQLYRSRMSLEMPAVRQRVIEEAKTAFLLN  
IQLFEELQELLTHDTKDQSPSRAPGLRQRASNKVDQSAVPETPRGKPLNTRSQAPELLRWVLTLSFLVAT  
VAVGLYAM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6052\\_d04.zip](https://cdn.origene.com/chromatograms/mk6052_d04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002133

**ORF Size:** 864 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002133.3](#)

**RefSeq Size:** 1606 bp

**RefSeq ORF:** 867 bp

**Locus ID:** 3162

**UniProt ID:** [P09601](#)

**Cytogenetics:** 22q12.3

**Domains:** Heme\_oxygenase

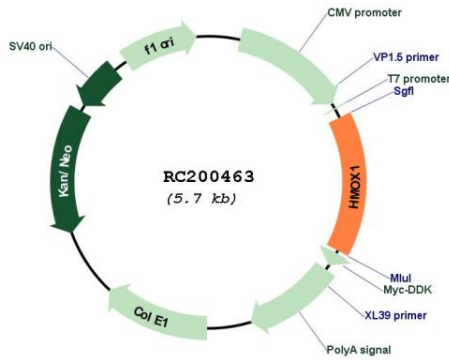
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Porphyrin and chlorophyll metabolism

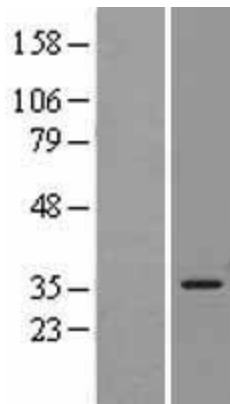
**MW:** 32.8 kDa

**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. [provided by RefSeq, Jul 2008]

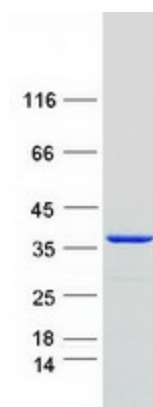
Product images:



Circular map for RC200463



Western blot validation of overexpression lysate (Cat# [LY400777]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200463 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HMOX1 protein (Cat# [TP300463]). The protein was produced from HEK293T cells transfected with HMOX1 cDNA clone (Cat# RC200463) using MegaTran 2.0 (Cat# [TT210002]).