

## Product datasheet for MR204499

### Hmox2 (NM\_010443) Mouse Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Hmox2 (NM_010443) Mouse Tagged ORF Clone                          |
| Tag:                      | Myc-DDK   |
| Symbol:                   | Hmox2   |
| Synonyms:                 | HO-2; HO2   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >MR204499 ORF sequence<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTTCAGAGGTGGAGACCTCGGAGGGGTAGATGAGTCAGAGAAGAAGTCTATGGCACCAGAAAAGG  
AAAACCATACAAAATGGCAGACCTTTCTGAGCTCCTGAAGGAAGGGACCAAGGAAGCACATGACCGAGC  
AGAAAATACCCAGTTTGTCAAAGACTTCTTGAAGGAAACATTAAGAAGGAGCTATTTAAGCTGGCCACC  
ACTGCACCTTACTTCACATACTCAGCCCTTGAGGAGGAAATGGACCGCAACAAGGACCACCCAGCCTTCG  
CCCCCTTATATTTCCCCACGGAGCTACACCGGAAGGCAGCACTGATCAAGGACATGAAGTATTTCTTTGG  
TGAAAACCTGGGAGGAGCAGGTGAAGTGCTCTGAGGCTGCCCAGAAGTATGTGGATCGGATCACTATGTA  
GGGCAAAATGAGCCAGAGCTGCTGGTGGCCATGCTTATACTCGTTACATGGGGGACCTTTCAGGAGGCC  
AGGTACTGAAGAAGGTTGCCAGAGGGCACTAAAACCTCCAGCACTGGGGAAGGGACCCAATTCTACCT  
GTTTGAGCATGTGGACAATGCCAGCAATCAAGCAGTTCTACCGCGCTAGAATGAATGCCTTGGACCTG  
AATTTGAAGACCAAGAGAGGATTGTGGAGGAGGCAATAAAGCCTTTGAATATAACATGCAGATATTCA  
GTGAACGGACAGGCTGGCTCCATGCTAGCAAGAGAAACCCTGGAGGATGGGCTCCCGGTACATGATGG  
GAAGGGAGATACGTAATGCCCTTTTATGCTGCTCAGCCAGACAAAGGTACACTAGGAGGCAGCAAC  
TGCCCCCTCCAGACAACCGTGGCTGTGCTGAGGAAGCCTAGCCTGCAGCTCATTCTGGCTGCCAGTGTGG  
CCTTGGTAGCTGGACTCTTGGCCTGGTACTACATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR204499 protein sequence  
Red=Cloning site Green=Tags(s)

MSSEVETSEGVDESEKNSMAPEKENHTKMADLSELLKEGTKEAHDRAENTQFVKDFLKGNIKKELFKLAT  
 TALYFTYSALIEEEMDRNKDHPAFAPLYFPTELHRKAALIKDMKYFFGENWEEQVKCEAAQKYVDRIHVY  
 GQNEPELLVAHAYTRYMGDLGGQVLKKVAQRALKLPSTGEGTQFYLFEHVDNAQQFKQFYRARMNALDL  
 NLKTKERIVVEANKAFEYNMQIFSELDQAGSMLARETLEDGLPVHDGKGDIRKCPFYAAQDPDKGTLGGSN  
 CPFQTTVAVLRKPSLQLILAASVALVAGLLAWYYM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_010443

**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\\_010443.2](#), [NP\\_034573.2](#)

**RefSeq Size:** 1274 bp

**RefSeq ORF:** 948 bp

**Locus ID:** 15369

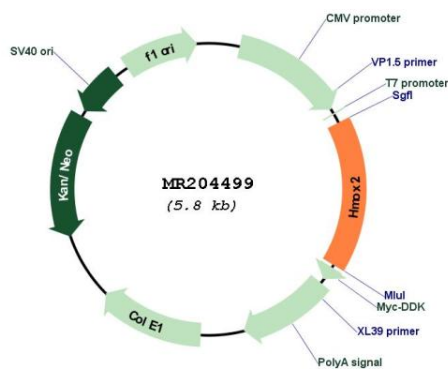
**UniProt ID:** [O70252](#)

**Cytogenetics:** 16 2.46 cM

**MW:** 35.7 kDa

**Gene Summary:** Heme oxygenase cleaves the heme ring at the alpha methene bridge to form biliverdin. Biliverdin is subsequently converted to bilirubin by biliverdin reductase. Under physiological conditions, the activity of heme oxygenase is highest in the spleen, where senescent erythrocytes are sequestrated and destroyed. Heme oxygenase 2 could be implicated in the production of carbon monoxide in brain where it could act as a neurotransmitter. [UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR204499