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Product datasheet for RC225452

Heme oxygenase 2 (HMOX2) (NM_001127205) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Heme oxygenase 2 (HMOX2) (NM_001127205) 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:

>RC225452 representing NM_001127205
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCAGCGGAAGTGGAAACCTCAGAGGGGGTAGACGAGTCAGAAAAAAAGAACTCTGGGGCCCTAGAAA
AGGAGAACCAAATGAGAATGGCTGACCTCTCGGAGCTCCTGAAGGAAGGGACCAAGGAAGCACACGACCG
GGCAGAAAACACCCAGTTTGTCAAGGACTTCTTGAAAGGCAACATTAAGAAGGAGCTGTTTAAGCTGGCC
ACCACGGCACTTTACTTCACATACTCAGCCCTCGAGGAGGAAATGGAGCGCAACAAGGACCATCCAGCCT
TTGCCCCTTTGTACTTCCCCATGGAGCTGCACCGGAAGGAGGCGCTGACCAAGGACATGGAGTATTTCTT
TGGTGAAAACTGGGAGGAGCAGGTGCAGTGCCCCAAGGCTGCCCAGAAGTACGTGGAGCGGATCCACTAC
ATAGGGCAGAACGAGCCGGAGCTACTGGTGGCCCATGCATACACCCGCTACATGGGGGATCTCTCGGGGG
GCCAGGTGCTGAAGAAGGTGGCCCAGCGAGCACTGAAACTCCCCAGCACAGGGGAAGGGACCCAGTTCTA
CCTGTTTGAGAATGTGGACAATGCCCAGCAGTTCAAGCAGCTCTACCGGGCCAGGATGAACGCCCTGGAC
CTGAACATGAAGACCAAAGAGAGGATCGTGGAGGAGGCCAACAAGGCTTTTGAGTATAACATGCAGATAT
TCAATGAACTGGACCAGGCCGGCTCCACACTGGCCAGAGAGACCTTGGAGGATGGGTTCCCTGTACACGA
TGGGAAAGGAGACATGCGTAAATGCCCTTTCTACGCTGCTGAACAAGACAAAGGTGCCCTGGAGGGCAGC
AGCTGTCCCTTCCGAACAGCTATGGCTGTGCTGAGGAAGCCCAGCCTCCAGTTCATCCTGGCCGCTGGTG
TGGCCCTAGCTGCTGGACTCTTGGCCTGGTACTACATG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC225452 representing NM_001127205
Red=Cloning site Green=Tags(s)

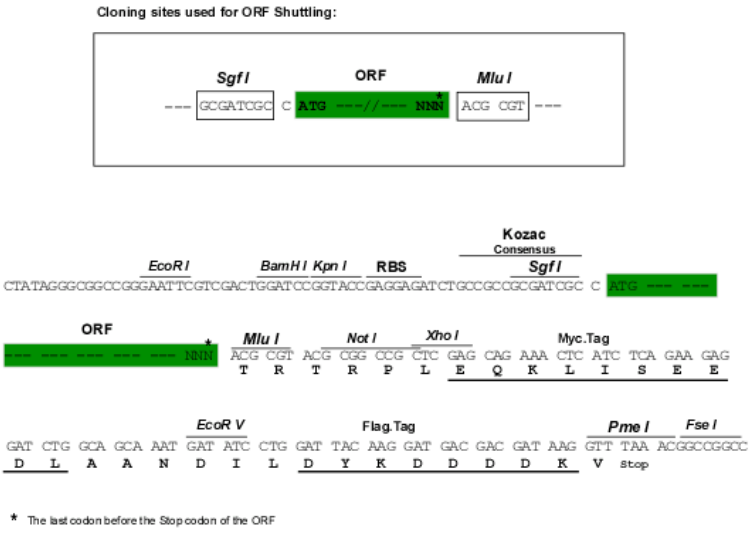
MSAEVETSEGVDESEKKNSGALEKENQMRMADLSELLKEGTKEAHDRAENTQFVKDFLKGNIKKELFKLA
TTALYFTYSALEEEMERNKDHPAFAPLYFPMELHRKEALTKDMEYFFGENWEEQVQCPKAAQKYVERIHY
IGQNEPELLVAHAYTRYMGDLSGGQVLKKVAQRALKLPSTGEGTQFYLFENVDNAQQFKQLYRARMNALD
LNMKTKERIVEEANKAFEYNMQIFNELDQAGSTLARETLEDGFPVHDGKGDMRKCPFYAAEQDKGALEGS
SCPFRTAMAVLRKPSLQFILAAGVALAAGLLAWYYM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8075_h08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001127205

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_001127205.1, NP_001120677.1

RefSeq Size: 1776 bp

RefSeq ORF: 951 bp

Locus ID: 3163

UniProt ID: P30519

Cytogenetics: 16p13.3

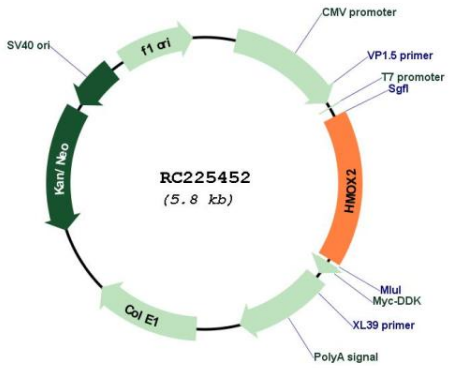
Protein Families: Transmembrane

Protein Pathways: Porphyrin and chlorophyll metabolism

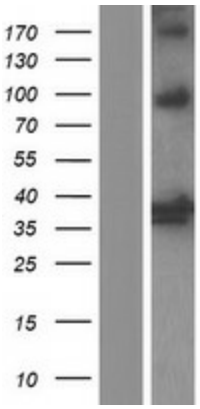
MW: 36 kDa

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]

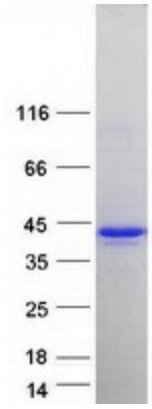
Product images:



Circular map for RC225452



Western blot validation of overexpression lysate (Cat# [LY426709]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected 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# [TP325452]). The protein was produced from HEK293T cells transfected with HMOX2 cDNA clone (Cat# RC225452) using MegaTran 2.0 (Cat# [TT210002]).