

## Product datasheet for RC214583

### Repulsive Guidance Molecule C (HFE2) (NM\_202004) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Repulsive Guidance Molecule C (HFE2) (NM_202004) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Repulsive Guidance Molecule C
Synonyms:	HFE2; HFE2A; JH; RGMC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214583 representing NM_202004 Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGCAGGAATGCATTGATCAGAAGGTGTATCAGGCTGAGGTGGATAATCTTCCTGTAGCCTTTGAAGATG  
 GTTCTATCAATGGAGGTGACCGACCTGGGGATCCAGTTTGTGCGATTCAAACCTGCTAACCTGGGAACCA  
 TGTGGAGATCCAAGCTGCCTACATTGGCACAATAATCATTCCGACAGAGCTGGGCAGCTCTCCTTC  
 TCCATCAAGGTAGCAGAGGATGTGGCCATGGCCTTCTCAGCTGAACAGGACCTGCAGCTCTGTGTTGGGG  
 GGTGCCCTCCAAGTCAGCGACTCTCTCGATCAGAGCGCAATCGTCGGGGAGCTATAACCATTGATACTGC  
 CAGACGGCTGTGCAAGGAAGGGCTTCCAGTGGAAGATGCTTACTTCCATTCTGTGTCTTTGATGTTTTA  
 ATTTCTGGTGATCCCAACTTTACCGTGGCAGCTCAGGCAGCACTGGAGGATGCCCGAGCCTTCTGCCAG  
 ACTTAGAGAAGCTGCATCTCTTCCCTCAGATGCTGGGGTTCTCTTCTCAGCAACCCTCTTAGCTCC  
 ACTCCTTTCTGGGCTCTTTGTTCTGTGGCTTTGCATTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>RC214583 representing NM_202004 Red=Cloning site Green=Tags(s)
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MQECIDQKVYQAEVDNLPVAFEDGSINGGDRPGGSSLSIQTANPGNHVEIQAAAYIGTTIIIRQTAGQLSF  
 SIKVAEDVAMAFSAEQDLQLCVGGCPPSQRLSRERNRRGAITIDTARRLCKEGLPVEDAYFHSCVFDVL  
 ISGDPNFTVAAQALEDARAFLPDLEKLHLFPSDAGVPLSSATLLAPLLSGLFVLWLCIQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV


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Chromatograms: [https://cdn.origene.com/chromatograms/mg5072\\_h07.zip](https://cdn.origene.com/chromatograms/mg5072_h07.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_202004

ORF Size: 600 bp

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).

**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\\_202004.4](#)

**RefSeq Size:** 1438 bp

**RefSeq ORF:** 603 bp

**Locus ID:** 148738

**UniProt ID:** [Q6ZVN8](#)

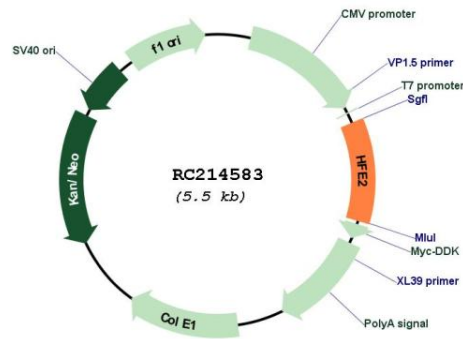
**Cytogenetics:** 1q21.1

**Protein Families:** Transmembrane

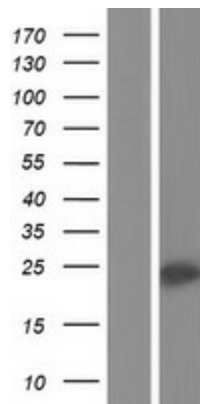
**MW:** 21.3 kDa

**Gene Summary:** The product of this gene is involved in iron metabolism. It may be a component of the signaling pathway which activates hepcidin or it may act as a modulator of hepcidin expression. It could also represent the cellular receptor for hepcidin. Two uORFs in the 5' UTR negatively regulate the expression and activity of the encoded protein. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. Defects in this gene are the cause of hemochromatosis type 2A, also called juvenile hemochromatosis (JH). JH is an early-onset autosomal recessive disorder due to severe iron overload resulting in hypogonadotrophic hypogonadism, hepatic fibrosis or cirrhosis and cardiomyopathy, occurring typically before age of 30. [provided by RefSeq, Oct 2015]

## Product images:



Circular map for RC214583



Western blot validation of overexpression lysate (Cat# [LY404359]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214583 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).