

## Product datasheet for **SC124916**

### Repulsive Guidance Molecule C (HFE2) (NM\_145277) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Repulsive Guidance Molecule C (HFE2) (NM_145277) Human Untagged Clone
Tag:	Tag Free
Symbol:	Repulsive Guidance Molecule C
Synonyms:	HFE2; HFE2A; JH; RGMC
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC124916 sequence for NM_145277 edited (data generated by NextGen Sequencing)

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ATGATCCAGCACAACTGCTCCCGCCAGGGCCCTACAGCCCCTCCCCGCCCGGGCCCC  
GCCCTTCCAGGCGCGGGCTCCCGCCTCCCTGCCCGGACCCCTTGTGACTATGAAGCCGG  
TTTTCCCGGCTGCATGGTCGTCCCGGGTCTTGCATTGCGCTTCTTCGGGGACCCC  
CATGTGCGCAGCTTCCACCATCACTTTACACATGCCGTGTTCAAGGAGCTTGGCCTCTA  
CTGGATAATGACTTCTCTTTGTCCAAGCCACCAGCTCCCCATGGCGTTGGGGGCAAC  
GCTACCGCCACCCGGAAGCTCACCATCATATTTAAGAATGCAGGAATGCATTGATCAG  
AAGGTGTATCAGGCTGAGGTGGATAATCTTCTGTAGCCTTTGAAGATGGTTCTATCAAT  
GGAGGTGACCGACCTGGGGGATCCAGTTTGTGATTCAAAGTCTAACCCCTGGGAACCAT  
GTGGAGATCCAAGCTGCCTACATTGGCACAATAATCATTCCGCGACAGCTGGGCAG  
CTCTCCTTCTCCATCAAGGTAGCAGAGGATGTGGCCATGGCCTTCTCAGCTGAACAGGAC  
CTGCAGCTCTGTGTTGGGGGTGCCCTCCAAGTCAGCGACTCTCTCGATCAGAGCGCAAT  
CGTCGGGGAGCTATAACCATTGATACTGCCAGACGGCTGTGCAAGGAAGGGCTTCCAGTG  
GAAGATGCTTACTTCCATTCTGTGTCTTTGATGTTTTAATTTCTGGTGATCCCACTTT  
ACCGTGGCAGCTCAGGCAGCACTGGAGGATGCCCGAGCCTTCTGCCAGACTTAGAGAAG  
CTGCATCTTCCCCTCAGATGCTGGGGTCTCTTTCTCAGCAACCCTTTAGCTCCA  
CTCCTTTCTGGGCTCTTTGTTCTGTGGCTTTCATTTCAGTAA
```

Clone variation with respect to NM\_145277.4



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_145277 unedited</p> <pre>CCGGCGTCCAGAATTTGTATACGATCTCACTATAGGCGGCCGGAATTCGCACCAGACAC GGAGGACCCCTGGCTGGACTGACCCACAGATAGGGAANATGGCTGGAGAATTGGATAGCA GAGTAATGTTTGGACCTCTGAAACACTCATTCTCAATGCAAGATCCTCCGCTGCAATGCT GAGTACGTATCGTCCACTCTGAGCCTTAGAGGTGGGGTTCATCAGGAGCACTTCGAGGA GGAGGAGGAGGAGCGGGGTGGAGGGTGGGCTCTGGCGGCCTGTGCGAGCCCTCCGC TCCTATGCGCTCTGCACTCGGCGCACCGCCCGCACCTGCCGCGGGGACCTCGCCTCCAT TCGGCGGTACATGGCATCGAAGACCTGATGATCCAGCACAACTGCTCCCGCCAGGCCCCT ACAGCCCCCCCCCGCCCCGGGGCCCCGCCCTTCCAGGCGGGGTCCGGCCTCCCTGCC CCGGACCCCTTGTGACTATGAAGCCGGTTTTCCCGGTGCATGGTCGTCGCCCGGGGTTT TTGCATTGCGCTTCTTCGGGGACCCCATGTGCGCAGCTTCCACCATCACTTTACACA TGCCGTGTCCAAGGAGCTTGGCCTCTACTGGATAATGACTTCTCTTTGTCCAAGCCACC AGCTCCCCATGGCGTTGGGGCCAACGCTACCGCCACCCGGAAGCTCACCATCATATTT AAGAACATGCAGGAATGCATTGATCAGAAAGTGTATCAGGCCTGAGTGGATAATCTTCT GTAGCCTTTGAAATGGTTCTATCAATGGAGGTGACCGACCTGGGGNATCCAGTTTGTGC ATTCAAACTGCTAAACCTGGAACCATGTTGAGATCCAGCC</pre>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_145277 unedited</p> <pre>ACGACATCGAGNNACCGCGCCGATTCTANATCGAGTTTTTTTTTTTTTTTTTTTTGGTGT GAAGAATTTGTAGCTTTAATAACAGATTAGTTAGGGGTAGGGATGATACTTCTGTCTTA CCTGTGCCATTCTTCAAAGCAGAGACTCCCTTACCTAAGAGCTAGACAATGCCTGCTT CATTTTTGAATCAAGAAAGCAGAACATACCTTACACACTCATATTCATCAATAGACTTC TTCCCTAATTATGTCTTCTCCTTTGAGTTTCTTATGGCTAATGATCATGTCTTCTGCT TTCAGCTCTTGCCTTTAAAAATCTCAACCCTTAAATCTTACTGATCATTAAAACTTC ATGACCTCTAAACTTATAAGGGTGAAATCTGCAGTAAATGGATTATAACAATTTGTTTAC TATAAATGAGGCTGGAAAAATTGGTGAAGAGCCCCACAGAGATCCGGAATGCAGTAACCT TGCCCAAGAAATCTTATTCTGAGATAATTTCAACCCTGGACTGCAGCCTCATCTGACCCTG GAAATGTCATTGTTTACGTGTCTCCTATGCCCTGCATCTTAAAGAAATCTTTAAATCC CTCTATGCCAATCTGTGTCTACAAAACATTCTTCAAACATGAATGGGGACTGAAGCCCC CTTAACAGAAGGGCAAGACCAGAAACAAGAAGCCAAAAAACTAGGGCAGCCTATATAC GGTTTACTGTGTAGAAAATTAATCAATATGTTATAAAATGAAATAACAATATCCTCCCTC TTATTGTTGGTAGGAAAGGCTCCGAGCCATATAATAAATTATTGTACTTAGTCTTGCACG GTGATAGAATAATGTGACGACCCGACAATATAAATACATCTAAAATGTCACCCAAGCGAG ACATGTTAACTTACGACACTAATAGAAAGAACCTATCGTTACGAN</pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_145277
<b>Insert Size:</b>	2050 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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\\_145277.3](#), [NP\\_660320.3](#)

**RefSeq Size:** 1961 bp

**RefSeq ORF:** 942 bp

**Locus ID:** 148738

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

**Cytogenetics:** 1q21.1

**Protein Families:** Transmembrane

**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]  
Transcript Variant: This variant (b) lacks a segment in the 5' UTR and an in-frame portion of the 5' coding region, compared to variant a. The resulting isoform (b) has a shorter N-terminus when compared to isoform a.