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# Product datasheet for SC308698

## Repulsive Guidance Molecule C (HFE2) (NM_213653) Human Untagged Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Repulsive Guidance Molecule C (HFE2) (NM_213653) Human Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | Repulsive Guidance Molecule C |
| **Synonyms:** | HFE2; HFE2A; JH; RGMC |
| **Mammalian Cell Selection:** | None |
| **Vector:** | pCMV6-XL4 |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

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**Fully Sequenced ORF:**

>OriGene sequence for NM_213653 edited
ATGGGGGAGCCAGGCCAGTCCCCTAGTCCCAGGTCCTCCCATGGCAGTCCCCCAACTCTA
AGCACTCTCACTCTCCTGCTGCTCCTCTGTGGACATGCTCATTCTCAATGCAAGATCCTC
CGCTGCAATGCTGAGTACGTATCGTCCACTCTGAGCCTTAGAGGTGGGGGTTCATCAGGA
GCACTTCGAGGAGGAGGAGGAGGAGGCCGGGGTGGAGGGGTGGGCTCTGGCGGCCTCTGT
CGAGCCCTCCGCTCCTATGCGCTCTGCACTCGGCGCACCGCCCGCACCTGCCGCGGGGAC
CTCGCCTTCCATTCGGCGGTACATGGCATCGAAGACCTGATGATCCAGCACAACTGCTCC
CGCCAGGGCCCTACAGCCCCTCCCCCGCCCCGGGGCCCCGCCCTTCCAGGCGCGGGCTCC
GGCCTCCCTGCCCCGGACCCTTGTGACTATGAAGGCCGGTTTTCCCGGCTGCATGGTCGT
CCCCCGGGGTTCTTGCATTGCGCTTCCTTCGGGGACCCCCATGTGCGCAGCTTCCACCAT
CACTTTCACACATGCCGTGTCCAAGGAGCTTGGCCTCTACTGGATAATGACTTCCTCTTT
GTCCAAGCCACCAGCTCCCCCATGGCGTTGGGGGCCAACGCTACCGCCACCCGGAAGCTC
ACCATCATATTTAAGAACATGCAGGAATGCATTGATCAGAAGGTGTATCAGGCTGAGGTG
GATAATCTTCCTGTAGCCTTTGAAGATGGTTCTATCAATGGAGGTGACCGACCTGGGGGA
TCCAGTTTGTCGATTCAAACTGCTAACCCTGGGAACCATGTGGAGATCCAAGCTGCCTAC
ATTGGCACAACTATAATCATTCGGCAGACAGCTGGGCAGCTCTCCTTCTCCATCAAGGTA
GCAGAGGATGTGGCCATGGCCTTCTCAGCTGAACAGGACCTGCAGCTCTGTGTTGGGGGG
TGCCCTCCAAGTCAGCGACTCTCTCGATCAGAGCGCAATCGTCGGGGAGCTATAACCATT
GATACTGCCAGACGGCTGTGCAAGGAAGGGCTTCCAGTGGAAGATGCTTACTTCCATTCC
TGTGTCTTTGATGTTTTAATTTCTGGTGATCCCAACTTTACCGTGGCAGCTCAGGCAGCA
CTGGAGGATGCCCGAGCCTTCCTGCCAGACTTAGAGAAGCTGCATCTCTTCCCCTCAGAT
GCTGGGGTTCCTCTTTCCTCAGCAACCCTCTTAGCTCCACTCCTTTCTGGGCTCTTTGTT
CTGTGGCTTTGCATTCAGTAAGGGGACCATCAGTCCCATTACTAGTTTGGAAATGATTTG
GAGATACAGATTGGCATAGAAGAATGTAAAGAATCATTAAAGGAAGCAGGGCCTAGGAGA
CACGTGAAACAATGACATTATCCAGAGTCAGATGAGGCTGCAGTCCAGGGTTGAAATTAT
CACAGAATAAGGATTCTGGGCAAGGTTACTGCATTCCGGATCTCTGTGGGGCTCTTCACC
AATTTTTCCAGCCTCATTTATAGTAAACAAATTGTTCTAATCCATTTACTGCAGATTTCA
CCCTTATAAGTTTAGAGGTCATGAAGGTTTTAATGATCAGTAAAGATTTAAGGGTTGAGA
TTTTTAAGAGGCAAGAGCTGAAAGCAGAAGACATGATCATTAGCCATAAGAAACTCAAAG
GAGGAAGACATAATTAGGGAAAGAAGTCTATTTGATGAATATGTGTGTGTAAGGTATGTT
CTGCTTTCTTGATTCAAAAATGAAGCAGGCATTGTCTAGCTCTTAGGTGAAGGGAGTCTC
TGCTTTTGAAGAATGGCACAGGTAGGACAGAAGTATCATCCCTACCCCCTAACTAATCTG
TTATTAAAGCTACAAATTCTTCACACCAWMAAAAAAAAAAAAAAA

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM_213653 unedited
NNNNGGGGCGTCAAATATTTGTATACGACTCACTATAGGGCGGCCGCGAATTCGCACGAG
ATGGGGGAGCCAGGCCAGTCCCCTAGTCCCAGGTCCTCCCATGGCAGTCCCCCAACTCTA
AGCACTCTCACTCTCCTGCTGCTCCTCTGTGGACATGCTCATTCTCAATGCAAGATCCTC
CGCTGCAATGCTGAGTACGTATCGTCCACTCTGAGCCTTAGAGGTGGGGGTTCATCAGGA
GCACTTCGAGGAGGAGGAGGAGGAGGCCGGGGTGGAGGGGTGGGCTCTGGCGGCCTCTGT
CGAGCCCTCCGCTCCTATGCGCTCTGCACTCGGCGCACCGCCCGCACCTGCCGCGGGGAC
CTCGCCTTCCATTCGGCGGTACATGGCATCGAAGACCTGATGATCCAGCACANACTGNCN
NTCCCGCCAGGGCCCTACAGCCCCTCCCCCGCCCCNCNNGGGGCCCCCCNNGCCCTTCCA
GGCGCGNGNNGCTCCGGCCTCCCTGCCCCGGACCCTTGTGACTATGAAGGCCGGTTTTCC
CGGCTGCATGGTCGTCCCCCGGGGTTCTTGCATTGCGCTTCCTTCGGGGACCCCCATGTG
CGCAGCTTCCACCATCACTTTCACACATGCCGTGTCCAAGGAGCTTGGCCTCTACTGGAT
AATGACTTCCTCTTTGTCCAAGCCACCAGCTCCCCCATGGCGTTGGGGGCCAACGCTACC
GCCACCCGGAAGCTCACCATCATATTTAAGAACATGCAGGAATGCATTGATCAGAAGGTG
TATCANGCTGAGGTGGATAATCTTCCTGTAGCCTTTGAAGATGGTTCTATCAATGGAGGT
GACCGACCTGGGGGATCCAGTTTGTCN

**3' Read Nucleotide Sequence:**

>Forward primer walk for NM_213653 unedited
GCCCCCCCTGGCGTTGGGGGCCAACNCTACCGCCACCCGGNAAGCTCACCATCATATTTA
AGAACATGCAGGAATGCATTGATCAGAAGGTGTATCAGGCTGAGGTGGATAATCTTCCTG
TAGCCTTTGAAGATGGTTCTATCAATGGAGGTGACCGACCTGGGGGATCCAGTTTGTCGA
TTCAAACTGCTAACCCTGGGAACCATGTGGAGATCCAAGCTGCCTACATTGGCACAACTA
TAATCATTCGGCAGACAGCTGGGCAGCTCTCCTTCTCCATCAAGGTAGCAGAGGATGTGG
CCATGGCCTTCTCAGCTGAACAGGACCTGCAGCTCTGTGTTGGGGGGTGCCCTCCAAGTC
AGCGACTCTCTCGATCAGAGCGCAATCGTCGGGGAGCTATAACCATTGATACTGCCAGAC
GGCTGTGCAAGGAAGGGCTTCCAGTGGAAGATGCTTACTTCCATTCCTGTGTCTTTGATG
TTTTAATTTCTGGTGATCCCAACTTTACCGTGGCAGCTCANGCAGCACTGGAGGATGCCC
GAGCCTTCCTGCCAGACTTAGAGAAGCTGCATCTCTTCCCCTCAGATGCTGGGGTTCCTC
TTTCCTCAGCAACCCTCTTAGCTCCACTCCTTTCTGGGCTCTTTGTTCTGTGGCTTTGCA
TTCAGTAAGGGGACCATCAGTCCCATTACTAGTTTGGAAATGATTTGGAGATACAGATTG
GCATAGAAGAAATGTAAGAATCATTAAAGGAAGCAGGGCCTANGAGACACGTGAAACAAT
GACATTATCCAGAGTCAGATGAAGCTGCAGTCCANGGGTGAAATTATCACAGAATAAGGA
TTCTGGGNCAGGGTACTGCATTCCGNATCTCTGTGGGGCTCTTCACCAATTTTCCAGCCT
CATTATAGTAAACAAATTGTCTN

**Restriction Sites:** Please inquire

**ACCN:** NM_213653

**Insert Size:** 1900 bp

**OTI Disclaimer:** 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).

**OTI Annotation:** The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

**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_213653.2, NP_998818.1

**RefSeq Size:** 2128 bp

**RefSeq ORF:** 1281 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 (a) represents the longest transcript, and encodes the longest isoform (a).