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Product datasheet for RC220228

Repulsive Guidance Molecule C (HFE2) (NM_145277) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Repulsive Guidance Molecule C (HFE2) (NM_145277) 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:

>RC220228 representing NM_145277
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGATCCAGCACAACTGCTCCCGCCAGGGCCCTACAGCCCCTCCCCCGCCCCGGGGCCCCGCCCTTCCAG
GCGCGGGCTCCGGCCTCCCTGCCCCGGACCCTTGTGACTATGAAGGCCGGTTTTCCCGGCTGCATGGTCG
TCCCCCGGGGTTCTTGCATTGCGCTTCCTTCGGGGACCCCCATGTGCGCAGCTTCCACCATCACTTTCAC
ACATGCCGTGTCCAAGGAGCTTGGCCTCTACTGGATAATGACTTCCTCTTTGTCCAAGCCACCAGCTCCC
CCATGGCGTTGGGGGCCAACGCTACCGCCACCCGGAAGCTCACCATCATATTTAAGAACATGCAGGAATG
CATTGATCAGAAGGTGTATCAGGCTGAGGTGGATAATCTTCCTGTAGCCTTTGAAGATGGTTCTATCAAT
GGAGGTGACCGACCTGGGGGATCCAGTTTGTCGATTCAAACTGCTAACCCTGGGAACCATGTGGAGATCC
AAGCTGCCTACATTGGCACAACTATAATCATTCGGCAGACAGCTGGGCAGCTCTCCTTCTCCATCAAGGT
AGCAGAGGATGTGGCCATGGCCTTCTCAGCTGAACAGGACCTGCAGCTCTGTGTTGGGGGGTGCCCTCCA
AGTCAGCGACTCTCTCGATCAGAGCGCAATCGTCGGGGAGCTATAACCATTGATACTGCCAGACGGCTGT
GCAAGGAAGGGCTTCCAGTGGAAGATGCTTACTTCCATTCCTGTGTCTTTGATGTTTTAATTTCTGGTGA
TCCCAACTTTACCGTGGCAGCTCAGGCAGCACTGGAGGATGCCCGAGCCTTCCTGCCAGACTTAGAGAAG
CTGCATCTCTTCCCCTCAGATGCTGGGGTTCCTCTTTCCTCAGCAACCCTCTTAGCTCCACTCCTTTCTG
GGCTCTTTGTTCTGTGGCTTTGCATTCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC220228 representing NM_145277
Red=Cloning site Green=Tags(s)

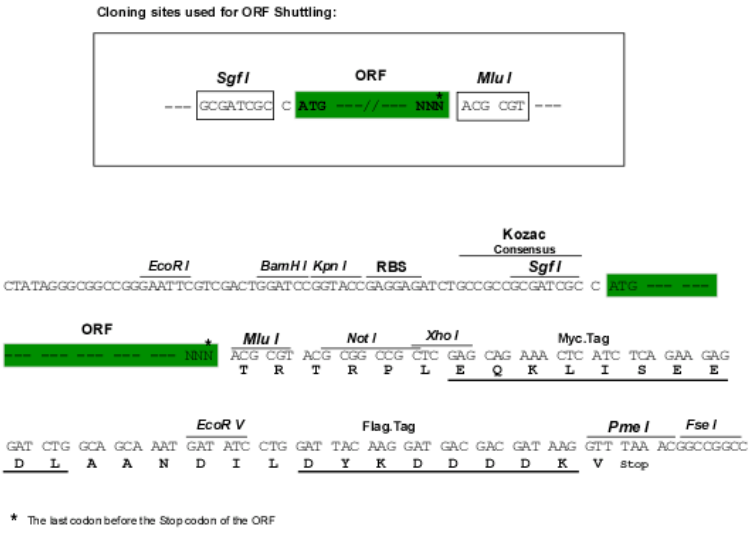
MIQHNCSRQGPTAPPPPRGPALPGAGSGLPAPDPCDYEGRFSRLHGRPPGFLHCASFGDPHVRSFHHHFH
TCRVQGAWPLLDNDFLFVQATSSPMALGANATATRKLTIIFKNMQECIDQKVYQAEVDNLPVAFEDGSIN
GGDRPGGSSLSIQTANPGNHVEIQAAYIGTTIIIRQTAGQLSFSIKVAEDVAMAFSAEQDLQLCVGGCPP
SQRLSRSERNRRGAITIDTARRLCKEGLPVEDAYFHSCVFDVLISGDPNFTVAAQAALEDARAFLPDLEK
LHLFPSDAGVPLSSATLLAPLLSGLFVLWLCIQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6233_a10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_145277

ORF Size: 939 bp

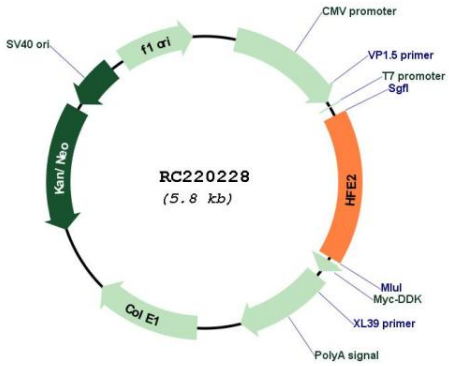
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

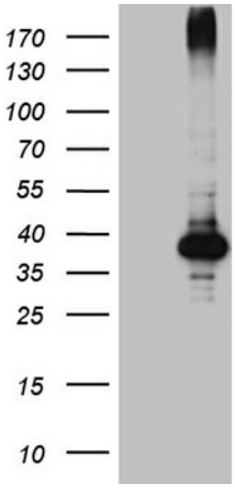
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_145277.5
RefSeq Size:	1961 bp
RefSeq ORF:	942 bp
Locus ID:	148738
UniProt ID:	Q6ZVN8
Cytogenetics:	1q21.1
Protein Families:	Transmembrane
MW:	33.5 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]

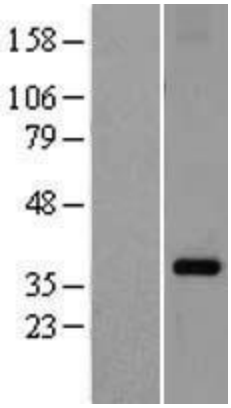
Product images:



Circular map for RC220228



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HFE2 (Cat# RC220228, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HFE2 (Cat# [TA809341])(1:2000).



Western blot validation of overexpression lysate (Cat# [LY408001]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220228 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).