

Product datasheet for **RC208683**

PEG10 (NM_001040152) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PEG10 (NM_001040152) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PEG10
Synonyms:	EDR; HB-1; Mar2; Mart2; MEF3L; RGAG3; RTL2; SIRH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC208683 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCGAACGAAGAAGGGACGAGCTCTCTGAAGAGATCAACAACCTTAAGAGAGAAGGTCATGAAGCAGT
CGGAGGAGAACAACAACCTGCAGAGCCAGGTGCAGAAGCTCACAGAGGAGAACCACCCTTCGAGAGCA
AGTGGAAACCACCCTGAGGATGAGGATGATGACATCGAGCTCCGCGGTGCTGCAGCAGCTGCTGCCCA
CCCCCTCCAATAGAGGAAGAGTGCCAGAAGACCTCCAGAGAAGTTCGATGGCAACCCAGACATGCTGG
CTCCTTTCATGGCCAGTGCCAGATCTTCATGGAAAAGAGCACCCAGGGATTTCTCAGTTGATCGTGTCCG
TGTCTGCTTCGTGACAAGCATGATGACCGCCGTGCTGCCGTTGGGCCCTCAGCAAAGCTGGAGCGCTCC
CACTACCTGATGCACAACCTACCCAGCTTTCATGATGGAATGAAGCATGTCTTTGAAGACCTCAGAGGC
GAGAGGTTGCCAAACGCAAGATCAGACGCCTGCGCCAAGGCATGGGGTCTGTGATCGACTACTCCAATGC
TTTCCAGATGATTGCCAGGACCTGGATTGGAACGAGCCTGCGCTGATTGACCAGTACCACGAGGGCCTC
AGCGACCACATTCAGGAGGAGCTCTCCACCTCGAGGTCGCAAGTCGCTGTCTGCTGATTGGGCAGT
GCATTCACATTGAGAGAAGGCTGGCCAGGGCTGCTGCAGCTCGCAAGCCACGCTCGCCACCCCGGGCGT
GGTGTTCCTCACATTGCAAGCCACCACCAGGTAGATCCAACCGAGCCGGTGGGAGGTGCCCGCATGCC
CTGACGCAGGAAGAAAAAGAAAGACGCAGAAAGCTGAACCTGTGCCTCTACTGTGGAACAGGAGGTCACT
ACGCTGACAATTGCTCTGCCAAGGCCTCAAAGTCTTCGCCGGCGGAAACTCCCCGGCCCCGCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC208683 protein sequence
Red=Cloning site Green=Tags(s)

MTERRRDELSEEINNLRKVMKQSEENNNLQSQVQKLTEENTTLREQVEPTPEDEDDDIELRGAAAAAAP
 PPPIEEECPEDLPEKFDGNPDM LAPFMAQCQIFMEKSTRDFSVDVRVRCFVTSMMTGRAARWASAKLERS
 HYL MHNYP AFMMEMKHVFEDPQRREVAKRKIRRLRQMGSVIDYSNAFQMI AQDL DWN EPALIDQYHEGL
 SDHIQEELSHLEVAKSLSALIGQCIIHERRLARAAAARKPRSPPRALVLPHIASHHQVDPTPEVGGARMR
 LTQEEKERRRKLNLCLYCGTGGHYADNCPAKASKSSPAGNSPAPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6362_b08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001040152

ORF Size: 975 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001040152.2](#)

RefSeq Size: 6628 bp

RefSeq ORF: 978 bp

Locus ID: 23089

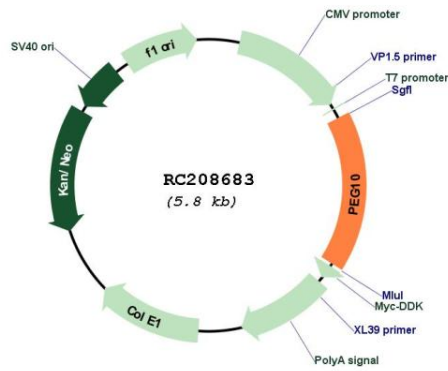
UniProt ID: [Q86TG7](#)

Cytogenetics: 7q21.3

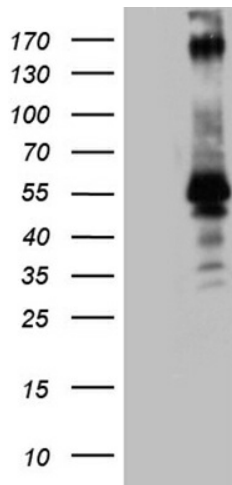
MW: 37 kDa

Gene Summary: This is a paternally expressed imprinted gene that is thought to have been derived from the Ty3/Gypsy family of retrotransposons. It contains two overlapping open reading frames, RF1 and RF2, and expresses two proteins: a shorter, gag-like protein (with a CCHC-type zinc finger domain) from RF1; and a longer, gag/pol-like fusion protein (with an additional aspartic protease motif) from RF1/RF2 by -1 translational frameshifting (-1 FS). While -1 FS has been observed in RNA viruses and transposons in both prokaryotes and eukaryotes, this gene represents the first example of -1 FS in a eukaryotic cellular gene. This gene is highly conserved across mammalian species and retains the heptanucleotide (GGGAAAC) and pseudoknot elements required for -1 FS. It is expressed in adult and embryonic tissues (most notably in placenta) and reported to have a role in cell proliferation, differentiation and apoptosis. Overexpression of this gene has been associated with several malignancies, such as hepatocellular carcinoma and B-cell lymphocytic leukemia. Knockout mice lacking this gene showed early embryonic lethality with placental defects, indicating the importance of this gene in embryonic development. Additional isoforms resulting from alternatively spliced transcript variants, and use of upstream non-AUG (CUG) start codon have been reported for this gene. [provided by RefSeq, Oct 2014]

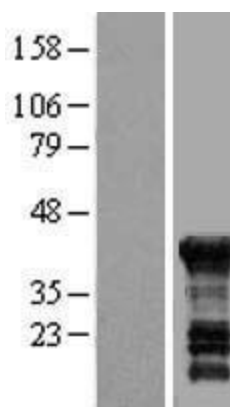
Product images:



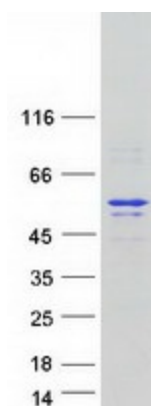
Circular map for RC208683



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PEG10 (Cat# RC208683, 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-PEG10. (1:2000) (Cat# [TA809524])(1:500). Positive lysates [LY421697] (100ug) and [LC421697] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY421697]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208683 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PEG10 protein (Cat# [TP308683]). The protein was produced from HEK293T cells transfected with PEG10 cDNA clone (Cat# RC208683) using MegaTran 2.0 (Cat# [TT210002]).