

Product datasheet for **RC201138**

RFC2 (NM_002914) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RFC2 (NM_002914) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RFC2
Synonyms:	RFC40
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201138 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGAGGTGGAGGCCGTCTGTGGTGGCGGGGCGAGGTGGAGGCCAGGACTCTGACCCTGCCCTGCCT
TCAGCAAGGCCCGGCAGCGCCGGCCACTACGAACTGCCGTGGGTTGAAAAATATAGGCCAGTAAAGCT
GAATGAAATTGTCGGGAATGAAGACACCGTGAGCAGGCTAGAGGTCTTTGCAAGGGAAGGAAATGTGCC
AACATCATCATTGCGGGCCCTCCAGGAACCGGCAAGACCACAAGCATTCTGTGCTTGGCCCGGGCCCTGC
TGGGCCAGCACTCAAAGATGCCATGTTGGAATCAATGCTTCAAATGACAGCATGACCGACGGAGCCCA
GCAAGCCTTGAGGAGAACCATGGAATCTACTCTAAAACCACTCGCTTCGCCCTTGCTTGTAAATGCTTCG
GATAAGATCATCGAGCCATTAGTCCCGCTGTGACGTCCTCCGGTACACAAAGCTGACCGACGCCCAGA
TCCTCACCAGGCTGATGAATGTTATCGAGAAGGAGAGGGTACCCTACACTGATGACGGCCTAGAAGCCAT
CATCTTACGGCCAGGGAGACATGAGGCAGGCGCTGAACAACCTGCAGTCCACCTTCTCAGGATTTGGC
TTCATTAACAGTGAGAACGTGTTCAAGGTCTGTGACGAGCCCCACCACTGCTGGTAAAGGAGATGATCC
AGCACTGTGTAATGCCAACATTGACGAAGCCTACAAGATTCTTGCTCACTTGTGGCATCTGGGCTACTC
ACCAGAAGATATCATTGGCAACATCTTTGAGTGTGTAACCTTTCCAAATGGCAGAATACCTGAAACTG
GAGTTTATCAAGGAAATTGGATACACTCACATGAAAATAGCGGAAGGAGTGAATCTCTTTGTCAGATGG
CAGGCCCTCGCAAGGCTGTGTGAGAAGACAATGGCCCCGGTGGCCAGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC201138 protein sequence
 Red=Cloning site Green=Tags(s)

MEVEAVCGGAGEVEAQSDPAPAFSKAPGSAGHYELPWVEKYRPVKLNEIVGNEDTVSRLEVFAREGNVP
 NIIIAGPPGTGKTTTILCLARALLGPALKDAMLELNASNDSMTDGAQQALRRRTMEIYSKTRFALACNAS
 DKIEPIQSRCAVLRYSKLTDAQILTRLMNVIEKERVYTDGGLAEIFTAQGDMRQALNNLQSTFSGFG
 FINSENVFKVCDPEHPLLVKEMIQHCNVANIDEAYKILAHLWHLGYSPEDIIGNIFRVCKTFQMAEYLKL
 EFIKEIGYTHMKIAEGVNSLLQAGLLARLCCQKTMAPVAS

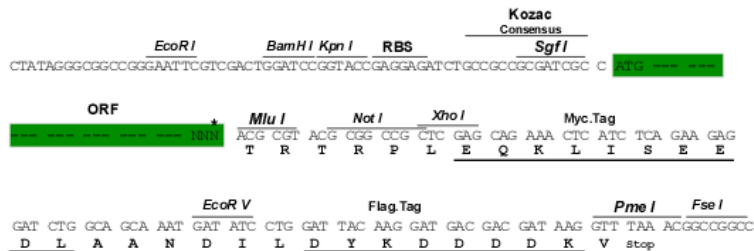
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6389_f07.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_002914

ORF Size: 960 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_002914.4](#)

RefSeq Size: 1657 bp

RefSeq ORF: 963 bp

Locus ID: 5982

UniProt ID: [P35250](#)

Cytogenetics: 7q11.23

Domains: AAA, AAA

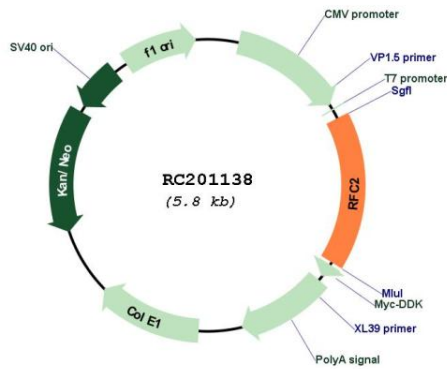
Protein Families: Druggable Genome, Stem cell - Pluripotency

Protein Pathways: DNA replication, Mismatch repair, Nucleotide excision repair

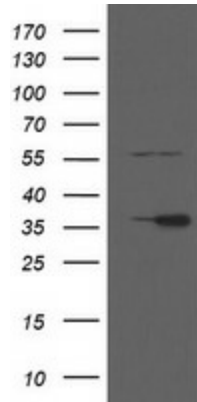
MW: 35.2 kDa

Gene Summary: This gene encodes a member of the activator 1 small subunits family. The elongation of primed DNA templates by DNA polymerase delta and epsilon requires the action of the accessory proteins, proliferating cell nuclear antigen (PCNA) and replication factor C (RFC). Replication factor C, also called activator 1, is a protein complex consisting of five distinct subunits. This gene encodes the 40 kD subunit, which has been shown to be responsible for binding ATP and may help promote cell survival. Disruption of this gene is associated with Williams syndrome. Alternatively spliced transcript variants encoding distinct isoforms have been described. A pseudogene of this gene has been defined on chromosome 2. [provided by RefSeq, Jul 2013]

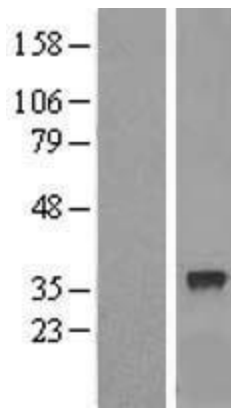
Product images:



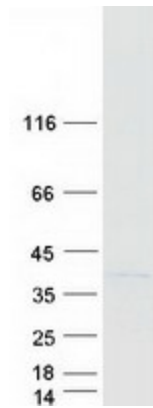
Circular map for RC201138



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RFC2 (Cat# RC201138, 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-RFC2 (Cat# [TA800273]). Positive lysates [LY419017] (100ug) and [LC419017] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419017]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201138 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RFC2 protein (Cat# [TP301138]). The protein was produced from HEK293T cells transfected with RFC2 cDNA clone (Cat# RC201138) using MegaTran 2.0 (Cat# [TT210002]).