

## Product datasheet for **RC226613**

### FZR1 (NM\_001136197) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	FZR1 (NM_001136197) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	FZR1
Synonyms:	CDC20C; CDH1; FZR; FZR2; HCDH; HCDH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC226613 representing NM_001136197 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGACCAGGACTATGAGCGGCGCTGCTTCGCCAGATCGTCATCCAGAATGAGAACACGATGCCACGG  
TCACAGAGATGCGGCGGACCCCTGACGCCTGCCAGCTCCCCAGTGTCTCGCCAGCAAGCACGGAGACCG  
CTTCATCCCTCCAGAGCCGGAGCCAACCTGGAGCGTGAACCTCCACAGGATTAACGAGAATGAGAAGTCT  
CCCAGTCAGAACCAGCAAGGACGCCACCTCAGACAACGGCAAAGACGGCCTGGCCTACTCTGCC  
TGCTCAAGAATGAGCTGCTGGGTGCCGGCATCGAGAAGGTGCAGGACCCGAGACTGAGGACCGCAGGCT  
GCAGCCCTCCACGCCTGAGAAGAAGGGTCTGTTACGGTGACGGCCTCTGTGACCTCTCAGTGGAGGG  
GACTCAGTGACCTCCGTGGGCTGGTCTGAGCGGGGAACCTGGTGGCGGTGGGCACACACAAGGGCTTCG  
TGCAGATCTGGGACGCAGCCGAGGGAAGAAGCTGTCCATGTTGGAGGGCCACACGGCACGCGTCGGGGC  
GCTGGCCTGGAATGCTGAGCAGCTGTCGTCCGGGAGCCGCGACCGCATGATCCTGCAGAGGGACATCCGC  
ACCCCGCCACTGCAGTCGGAGCGGCGGCTGCAGGGCCACCGGCAGGAGGTGTGCGGGCTCAAGTGGTCCA  
CAGACCACAGCTCCTCGCTCGGGGGCAACGACAACAAGCTGCTGGTCTGGAATCACTCGAGCCTGAG  
CCCCGTGCAGCAGTACACGGAGCACCTGGCGCCGTGAAGGCCATCGCCTGGTCCCACATCAGCACGGG  
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TGCAAGTATCGACACGGGCTCCCAAGTGTGCAATCTGGCCTGGTCCAAGCACGCAACGAGCTGGTGAG  
CACGCACGGCTACTCACAGAACCAGATCCTTGTCTGGAAGTACCCCTCCCTGACCCAGGTGGCCAAGCTG  
ACCGGGCACTCCTACCGCTGCTGTACCTGGCAATGTCCCTGATGGGAGGCCATCGTCACTGGTGTGCT  
GAGACGAGACCCTGAGGTTCTGGAACGTCTTTAGCAAAACCCGTTGACAAAGGAGTCTGTGTCTGTGCT  
CAACCTTTCACCAGGATCCGG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC226613 representing NM\_001136197  
Red=Cloning site Green=Tags(s)

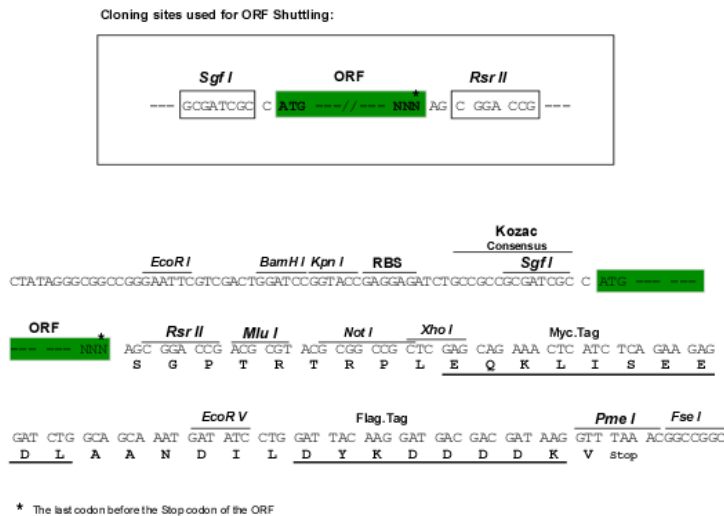
MDQDYERRLLRQIVIQNENTMPRVTEMRRRLTPASSPVSSPSKHGDRFIPSRAGANWSVNFHRINENEKS  
 PSQNRKAKDATSDNGKDGLAYSALLKNELLGAGIEKVQDPQTEDRRLQPSTPEKKGLFTVTRLCDLSVEG  
 DSVTSVGWSEGRNLVAVGTHKGFVQIWDAAGKKLSMLEGHTARVGALAWNAEQLSSGSRDRMILQRDIR  
 TPPLQSERRLQGHRQEVCGLKWSTDHQLLASGGNDNKLVLVNHSSLSPVQYQTEHLAAVKAIAWSPHQHG  
 LLASGGGTADRCIRFWNTLTGQPLQCIDTGSQVCNLAWSKHANELVSTHGYSQNQILVWKYPSLTQVAKL  
 TGHSYRVLYLAMSPDGEAIVTGAGDETLRFWNVFSKTRSTKESVSVLNLFRIR

SGPTRTRRLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8057\\_f10.zip](https://cdn.origene.com/chromatograms/mk8057_f10.zip)

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



**ACCN:** NM\_001136197

**ORF Size:** 1212 bp

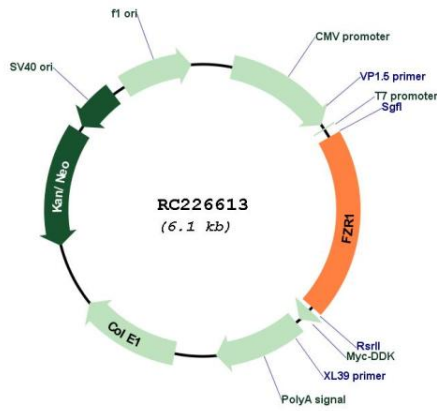
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

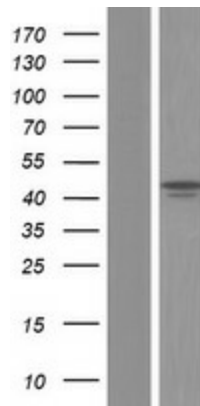
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001136197.1, NP_001129669.1</u>
<b>RefSeq ORF:</b>	1215 bp
<b>Locus ID:</b>	51343
<b>UniProt ID:</b>	<u>Q9UM11</u>
<b>Cytogenetics:</b>	19p13.3
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Cell cycle, Progesterone-mediated oocyte maturation, Ubiquitin mediated proteolysis
<b>MW:</b>	44.7 kDa
<b>Gene Summary:</b>	<p>Substrate-specific adapter for the anaphase promoting complex/cyclosome (APC/C) E3 ubiquitin-protein ligase complex. Associates with the APC/C in late mitosis, in replacement of CDC20, and activates the APC/C during anaphase and telophase. The APC/C remains active in degrading substrates to ensure that positive regulators of the cell cycle do not accumulate prematurely. At the G1/S transition FZR1 is phosphorylated, leading to its dissociation from the APC/C. Following DNA damage, it is required for the G2 DNA damage checkpoint: its dephosphorylation and reassociation with the APC/C leads to the ubiquitination of PLK1, preventing entry into mitosis. Acts as an adapter for APC/C to target the DNA-end resection factor RBBP8/CtIP for ubiquitination and subsequent proteasomal degradation. Through the regulation of RBBP8/CtIP protein turnover, may play a role in DNA damage response, favoring DNA double-strand repair through error-prone non-homologous end joining (NHEJ) over error-free, RBBP8-mediated homologous recombination (HR) (PubMed:25349192). [UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RC226613



Western blot validation of overexpression lysate (Cat# [LY427845]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226613 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).