

## Product datasheet for **RG226613**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	FZR1 (NM_001136197) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	FZR1
Synonyms:	CDC20C; CDH1; FZR; FZR2; HCDH; HCDH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG226613 representing NM_001136197 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGACCAGGACTATGAGCGGCGCTGCTTCGCCAGATCGTCATCCAGAATGAGAACACGATGCCACGG  
TCACAGAGATGCGGCGGACCCCTGACGCCTGCCAGCTCCCCAGTGTCTCGCCAGCAAGCACGGAGACCG  
CTTCATCCCTCCAGAGCCGGAGCCAACCTGGAGCGTGAACCTCCACAGGATTAACGAGAATGAGAAGTCT  
CCCAGTCAGAACCGAAAGCCAAGGACGCCACCTCAGACAACGGCAAAGACGGCCTGGCCTACTCTGCC  
TGCTCAAGAATGAGCTGCTGGGTGCCGGCATCGAGAAGGTGCAGGACCCGCAGACTGAGGACCGCAGGCT  
GCAGCCCTCCACGCCTGAGAAGAAGGGTCTGTTACGGTGACGCGCTCTGTGACCTCTCAGTGGAAAGGG  
GACTCAGTGACCTCCGTGGGCTGGTCTGAGCGGGGAACCTGGTGGCGGTGGGCACACACAAGGGCTTCG  
TGCAGATCTGGGACGCAGCCGCAGGGAAGAAGCTGTCCATGTTGGAGGGCCACACGGCACGCGTCGGGGC  
GCTGGCCTGGAATGCTGAGCAGCTGTCTCCGGGAGCCGCGACCCGATGATCCTGCAGAGGGACATCCGC  
ACCCCGCCACTGCAGTCGGAGCGGCGGCTGCAGGGCCACCGGCAGGAGGTGTGCGGGCTCAAGTGGTCCA  
CAGACCACAGCTCCTCGCTCGGGGGCAACGACAACAAGCTGCTGGTCTGGAATCACTCGAGCCTGAG  
CCCCGTGCAGCAGTACACGGAGCACCTGGCGCCGTGAAGGCCATCGCCTGGTCCCACATCAGCACGGG  
CTGCTGGCCTCGGGGGCGGCACAGCTGACCGCTGTATCCGCTTCTGGAACACGCTGACAGGACAACCAC  
TGCACTGTATCGACACGGGCTCCCAAGTGTCAATCTGGCCTGGTCCAAGCACGCCAACGAGCTGGTGAG  
CACGCACGGCTACTCACAGAACCAGATCCTTGTCTGGAAGTACCCCTCCCTGACCCAGGTGGCCAAGCTG  
ACCGGGCACTCCTACCGCTGTGTACCTGGCAATGTCCCTGATGGGAGGCCATCGTCACTGGTGTCTG  
GAGACGAGACCTGAGGTTCTGGAACGTCTTAGCAAACCCGTTGACAAAGGAGTCTGTGTCTGTCTGCT  
CAACCTTTCACCAGGATCCGG

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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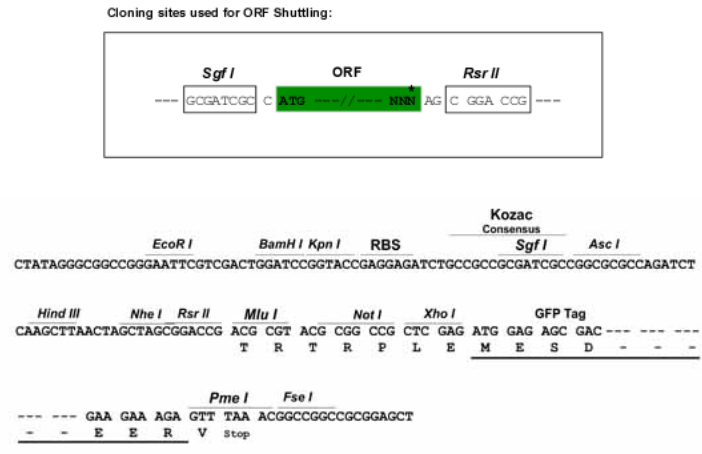
**Protein Sequence:** >RG226613 representing NM\_001136197  
 Red=Cloning site Green=Tags(s)

MDQDYERRLLRQIVIQNENTMPRVTEMRRLLTPASSPVSSPSKHGDRFIPSRAGANWSVNFHFRINENEKS  
 PSQNRKAKDATSDNGKDLAYSALLKNELLGAGIEKVQDPQTEDRRLQPSTPEKKGLFTVTRLCDLSVEG  
 DSVTSVGWSEKGNLVAVGTHKGFVQIWDAAGKLSMLEGHTARVWALAWNAEQLSSGSRDRMILQRDIR  
 TPPLQSERRLQGHREQVCGCLKWSTDHQLLASGGNDNKLWVNHSSLSPVQQYTEHLAAVKAIAWSPHQHG  
 LLASGGGTADRCIRFWNTLTGQPLQCIDTGSQVCNLAWSKHANELVSTHGYSQNQILVWKYPSLTQVAKL  
 TGHSYRVLYLAMSPDGEAIVTGAGDETLRFWNVFSKTRSTKESVSVLNLFRIR

SGPTRRRLE - GFP Tag - V

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



**ACCN:** NM\_001136197

**ORF Size:** 1212 bp

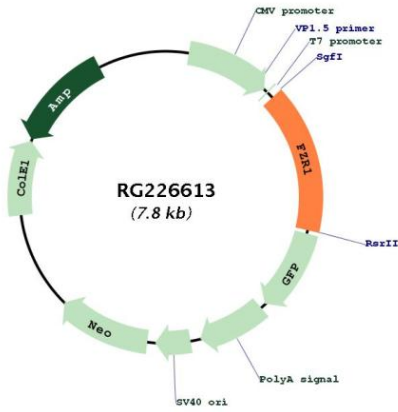
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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 Size:</b>	3170 bp
<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>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 RG226613