

## Product datasheet for **SC325888**

### FZR1 (NM\_001136197) Human Untagged Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | FZR1 (NM_001136197) Human Untagged Clone   |
| Tag:                      | Tag Free   |
| Symbol:                   | FZR1   |
| Synonyms:                 | CDC20C; CDH1; FZR; FZR2; HCDH; HCDH1   |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)   |
| E. coli Selection:        | Kanamycin (25 ug/mL)   |
| Fully Sequenced ORF:      | >SC325888 representing NM_001136197.<br>Blue=Insert sequence Red=Cloning site Green=Tag(s) |

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GCTCGTTTAGTGAACCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGGACCAAGGACTATGAGCGGCGCTGCTTCGCCAGATCGTCATCCAGAATGAGAACACGATGCCACGC
GTCACAGAGATGCGGCGGACCCTGACGCCTGCCAGCTCCCAAGTGTCTCGCCAGCAAGCACGGAGAC
CGCTTCATCCCTCCAGAGCCGGAGCCAACTGGAGCGTGAACCTCCACAGGATTAACGAGAATGAGAAG
TCTCCAGTCAGAACCGGAAAGCCAAGGACGCCACCTCAGACAACGGCAAAGACGGCCTGGCCTACTCT
GCCCTGCTCAAGAATGAGCTGCTGGGTGCCGGCATCGAGAAGGTGCAGGACCCGAGACTGAGGACCGC
AGGCTGCAGCCCTCCACGCCTGAGAAGAAGGTCTGTTACGGTGACGCGCTCTGTGACCTCTCAGTG
GAAGGGGACTCAGTGACCTCCGTGGGCTGGTCTGAGCGGGGAACCTGGTGGCGGTGGGCACACACAAG
GGCTTCGTGCAGATCTGGGACGCAGCCGAGGAAGAAGCTGTCCATGTTGGAGGGCCACACGGCACGC
GTGGGGCGCTGGCCTGGAATGCTGAGCAGCTGTGCTCCGGGAGCCGCGACCGCATGATCTGCAGAGG
GACATCCGCACCCCGCCACTGCAGTCGGAGCGGCGGTGCAGGGCCACCGGCAGGAGGTGTGCGGGCTC
AAGTGGTCCACAGACCACAGCTCCTCGCTCGGGGGCAACGACAACAAGCTGCTGGTCTGGAATCAC
TCGAGCCTGAGCCCCGTGCAGCAGTACACGGAGCACCTGGCGGCCGTGAAGGCCATCGCCTGGTCCCCA
CATCAGCACGGGCTGCTGGCCTCGGGGGCGGCACAGCTGACCGCTGTATCCGCTTCTGGAACACGCTG
ACAGGACAACCACTGCAGTGTATCGACACGGGCTCCCAAGTGTGCAATCTGGCCTGGTCCAAGCACGCC
AACGAGCTGGTGAGCACGCACGGCTACTCACAGAACCAGATCCTTGTCTGGAAGTACCCCTCCCTGACC
CAGGTGGCCAAGCTGACCGGGCACTCCTACCGCTGCTGTACCTGGCAATGTCCCTGATGGGGAGGCC
ATCGTCACTGGTGTGGAGACGAGACCCTGAGGTTCTGGAACGTCTTTAGCAAAACCCGTTGACAAAG
GAGTCTGTGTCTGTGCTCAACCTCTTACCAGGATCCGGTAA
AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGAT
ATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

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Restriction Sites: SgfI-RsrII



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|                               |   |
|-------------------------------|---|
| <b>ACCN:</b>                  | NM_001136197  |
| <b>Insert Size:</b>           | 1215 bp   |
| <b>OTI Disclaimer:</b>        | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  |
| <b>OTI Annotation:</b>        | This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.  |
| <b>Components:</b>            | 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</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>MW:</b>                    | 44.9 kDa  |

**Gene Summary:**

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]

Transcript Variant: This variant (3) skips multiple exons in the central coding region and lacks a short in-frame segment in the 3' coding region compared to variant 1. The encoded protein (isoform 3) lacks a WD40 repeat and has a shorter C-terminus compared to isoform 1. This isoform is also known as isoform beta.