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# Product datasheet for RG232137

## Geminin (GMNN) (NM_001251989) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Geminin (GMNN) (NM_001251989) Human Tagged ORF Clone |
| **Tag:** | TurboGFP |
| **Symbol:** | GMNN |
| **Synonyms:** | Gem; MGORS6 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

**ORF Nucleotide Sequence:**

>RG232137 representing NM_001251989
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAATCCCAGTATGAAGCAGAAACAAGAAGAAATCAAAGAGAATATAAAGAATAGTTCTGTCCCAAGAA
GAACTCTGAAGATGATTCAGCCTTCTGCATCTGGATCTCTTGTTGGAAGAGAAAATGAGCTGTCCGCAGG
CTTGTCCAAAAGGAAACATCGGAATGACCACTTAACATCTACAACTTCCAGCCCTGGGGTTATTGTCCCA
GAATCTAGTGAAAATAAAAATCTTGGAGGAGTCACCCAGGAGTCATTTGATCTTATGATTAAAGAAAATC
CATCCTCTCAGTATTGGAAGGAAGTGGCAGAAAAACGGAGAAAGGCGCTGTATGAAGCACTTAAGGAAAA
TGAGAAACTTCATAAAGAAATTGAACAAAAGGACAATGAAATTGCCCGCCTGAAAAAGGAGAATAAAGAA
CTGGCAGAAGTAGCAGAACATGTACAGTATATGGCAGAGCTAATAGAGAGACTGAATGGTGAACCTCTGG
ATAATTTTGAATCACTGGATAATCAGGAATTTGATTCTGAAGAAGAAACTGTTGAGGATTCTCTAGTGGA
AGACTCAGAAATTGGCACGTGTGCTGAAGGAACTGTATCTTCCTCTACGGATGCAAAGCCATGTATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG232137 representing NM_001251989
Red=Cloning site Green=Tags(s)

MNPSMKQKQEEIKENIKNSSVPRRTLKMIQPSASGSLVGRENELSAGLSKRKHRNDHLTSTTSSPGVIVP
ESSENKNLGGVTQESFDLMIKENPSSQYWKEVAEKRRKALYEALKENEKLHKEIEQKDNEIARLKKENKE
LAEVAEHVQYMAELIERLNGEPLDNFESLDNQEFDSEEETVEDSLVEDSEIGTCAEGTVSSSTDAKPCI

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

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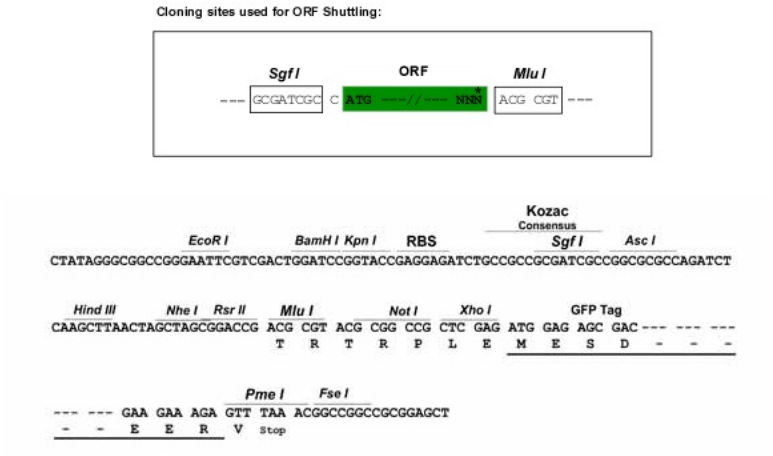
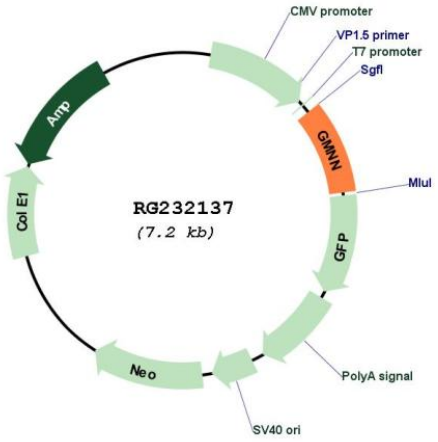
**Cloning Scheme:**




**Plasmid Map:**




| | |
|---|---|
| **ACCN:** | NM_001251989 |
| **ORF Size:** | 627 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). |

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**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.

**RefSeq:** NM_001251989.2

**RefSeq Size:** 1143 bp

**RefSeq ORF:** 630 bp

**Locus ID:** 51053

**UniProt ID:** O75496

**Cytogenetics:** 6p22.3

**Protein Families:** Druggable Genome, Stem cell - Pluripotency

**Gene Summary:** This gene encodes a protein that plays a critical role in cell cycle regulation. The encoded protein inhibits DNA replication by binding to DNA replication factor Cdt1, preventing the incorporation of minichromosome maintenance proteins into the pre-replication complex. The encoded protein is expressed during the S and G2 phases of the cell cycle and is degraded by the anaphase-promoting complex during the metaphase-anaphase transition. Increased expression of this gene may play a role in several malignancies including colon, rectal and breast cancer. Alternatively spliced transcript variants have been observed for this gene, and two pseudogenes of this gene are located on the short arm of chromosome 16. [provided by RefSeq, Oct 2011]

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