Product datasheet for RG232138

Geminin (GMNN) (NM_001251990) Human Tagged ORF Clone

Product data:

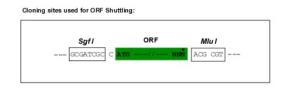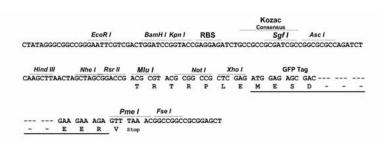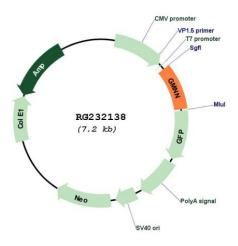|	
Product Type:	Expression Plasmids
Product Name:	Geminin (GMNN) (NM_001251990) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GMNN
Synonyms:	Gem; MGORS6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG232138 representing NM_001251990 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:	>RG232138 representing NM_001251990 Red=Cloning site Green=Tags(s) MNPSMKQKQEEIKENIKNSSVPRRTLKMIQPSASGSLVGRENELSAGLSKRKHRNDHLTSTTSSPGVIVP ESSENKNLGGVTQESFDLMIKENPSSQYWKEVAEKRRKALYEALKENEKLHKEIEQKDNEIARLKKENKE LAEVAEHVQYMAELIERLNGEPLDNFESLDNQEFDSEEETVEDSLVEDSEIGTCAEGTVSSSTDAKPCI TRTRPLE – GFP Tag – V
Restriction Sites:	SgfI-MluI

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Cloning Scheme:

Cloning sites used for ORF Shuttling:

Sgf I	ORF	Mlu I
GCGATCGC C	ATG ---//--- NNN*	ACG CGT ---

Kozac Consensus

EcoR I   BamH I Kpn I   RBS   Sgf I   Asc I

CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGCGCCAGATCT

Hind III   Nhe I Rsr II   Mlu I   Not I   Xho I   GFP Tag

CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---
                          T   R   T   R   P   L   E   M   E   S   D   -   -   -

Pme I   Fse I

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT
-   -   E   E   R   V Stop

Plasmid Map:

ACCN:	NM_001251990
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).

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_001251990.2
RefSeq Size:	1067 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]