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Product datasheet for RC221451

GEN1 (NM_182625) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GEN1 (NM_182625) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GEN1
Synonyms:	Gen
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC221451 representing NM_182625
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGAGTGAATGACTTGTGGCAAATTTTGGAGCCTGTTAAGCAACACATCCCCTTGCGTAATCTTGGTG
GGAAAACCATTGCAGTTGATCTGAGTCTCTGGGTGTGTGAGGCACAGACAGTCAAAAAAATGATGGGCAG
CGTCATGAAGCCCCACCTCAGGAACTTATTTTTTCGTATCTCATATTTAACACAAATGGATGTAAAACTG
GTATTTGTTATGGAAGGGGAACCACCAAAGCTGAAAGCTGATGTCATAAGCAAGAGGAATCAGACTCGGT
ATGGGTCTTCTGGAAAATCGTGGTCTCAGAAAACAGGGAGATCACATTTTAAATCAGTCTTAAGAGAGTG
CCTCCATATGCTCGAATGCTTAGGAATCCCCTGGGTTCAGGCTGCTGGGGAAGCTGAAGCCATGTGTGCT
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TCATGATTTAAAATCAGAAGTTGAATCAGAGCTATCAGCCATCCCTGATGGCTTTGAAAATATCCCAGAA
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TTAGTCCTGAAGAGCATCTACTTTCTGGCATTACTGATTTATGTCTTCAGGATTTGCCTTTAAAGGAACG
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC221451 representing NM_182625
Red=Cloning site Green=Tags(s)

MGVNDLWQILEPVKQHIPLRNLGGKTIAVDLSLWVCEAQTVKKMMGSVMKPHLRNLFFRISYLTQMDVKL
VFVMEGEPPKLKADVISKRNQTRYGSSGKSWSQKTGRSHFKSVLRECLHMLECLGIPWVQAAGEAEAMCA
YLNAGGHVDGCLTNDGDTFLYGAQTVYRNFTMNTKDPHVDCYTMSSIKSKLGLDRDALVGLAILLGCDYL
PKGVPGVGKEQALKLIQILKGQSLLQRFNRWNETSCNSSPQLLVTKKLAHCSVCSHPGSPKDHERNGCRL
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PNTALDHSRKVDMQTTRKILMKKSVCLDRHSSDEQSAPVFGKAKYTTQRMKHSSQKHNSSHFKESGHNKL
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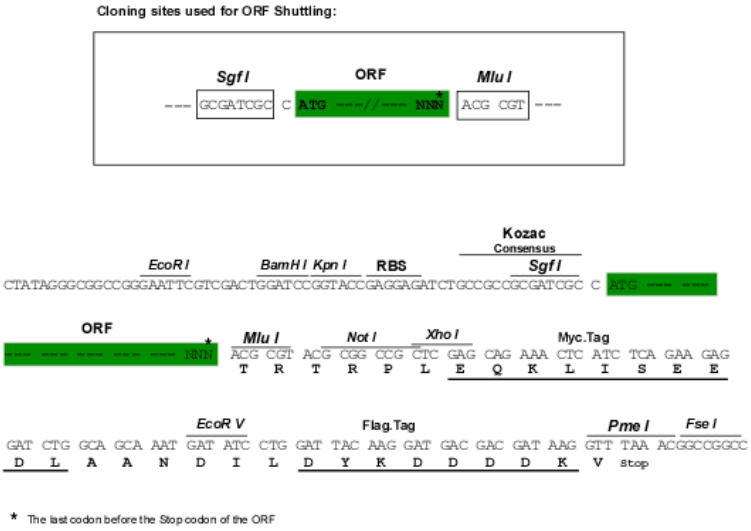
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2527_b05.zip

Restriction Sites: SgfI-MluI

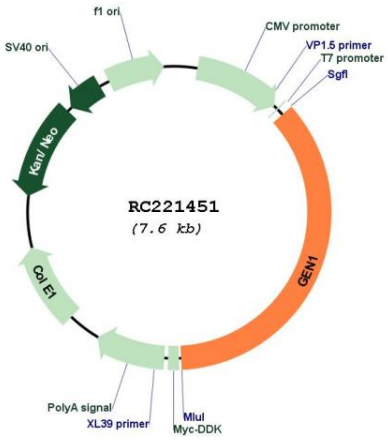
Cloning Scheme:



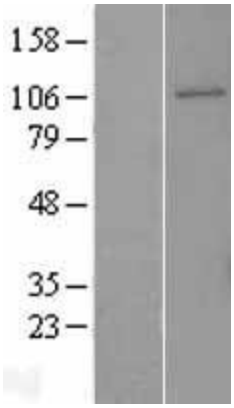
ACCN: NM_182625

ORF Size:	2724 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_182625.5
RefSeq Size:	3024 bp
RefSeq ORF:	2727 bp
Locus ID:	348654
UniProt ID:	Q17RS7
Cytogenetics:	2p24.2
MW:	102.7 kDa
Gene Summary:	This gene encodes a member of the Rad2/xeroderma pigmentosum group G nuclease family, whose members are characterized by N-terminal and internal xeroderma pigmentosum group G nuclease domains followed by helix-hairpin-helix domains and disordered C-terminal domains. The protein encoded by this gene is involved in resolution of Holliday junctions, which are intermediate four-way structures that covalently link DNA during homologous recombination and double-strand break repair. The protein resolves Holliday junctions by creating dual incisions across the junction to produce nicked duplex products that can be ligated. In addition, this protein has been found to localize to centrosomes where it has been implicated in regulation of centrosome integrity. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RC221451



Western blot validation of overexpression lysate (Cat# [LY427099]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC226255] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).