

Product datasheet for **RC226255**

GEN1 (NM_001130009) Human Tagged ORF Clone

Product data:

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|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | GEN1 (NM_001130009) 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) |



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ORF Nucleotide Sequence:

>RC226255 representing NM_001130009
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAGTGAATGACTTGTGGCAAATTTTGGAGCCTGTTAAGCAACACATCCCCTTCGCTAATCTTGGTG
 GAAAACCATTCAGTTGATCTGAGTCTCTGGGTGTGAGGCACAGACAGTCAAAAAAATGATGGGCAG
 CGTCATGAAGCCCCACCTCAGGAACTTATTTTTTCGTATCTCATTTTAAACAAATGGATGAAAACTG
 GTATTTGTATGGAAGGGGAACCAAGCTGAAAGCTGATGTCATAAGCAAGAGGAATCAGACTCGGT
 ATGGGTCTTCGAAAATCGTGGTCTCAGAAAACAGGGAGATCACATTTTAAATCAGTCTTAAGAGAGTG
 CCTCCATATGCTCGAATGCTTAGGAATCCCCTGGGTTCCAGGCTGCTGGGAAGCTGAAGCCATGTGTCT
 TATCTCAATGCTGGTGGTCATGTCGATGGCTGCCTACCAATGATGGAGATACTTTCCTTTATGGGGCC
 AGACTGTTACAGGAATTCACATATGAATACAAGGACCCACATGTTGACTGTTACACAATGTCATCTAT
 CAAGAGTAACTAGGTTTGGATAGAGATGCTCTGGTTGGATTAGCAATACTTCTTGGCTGTGATTATCTC
 CAAAGGGAGTCCCTGGAGTTGAAAAGAGCAAGCATTAAAACTTATACAGATTTTAAAAGGGCAAAGTT
 TACTTCAGAGTTTAAATCGGTGGAATGAAACATCTTGAACCTCTAGTCCACAACCTGCTAGTCACTAAAA
 ACTGGCTCATTGTTCCGATGTTCCCATCCAGGTTACCTAAGGATCATGAACGTAATGGATGCAGATTA
 TGTAAGTGTATAAATTTGTGAGCCACATGACTATGAATACTGCTGTCCTTGTGAGTGGCACCGTACAG
 AACATGATAGGCAACTCAATGAAGTAGAGAACAATATTAAGAAGAAAGCTTGTGTTGTGAGGGATTCCC
 ATTCCATGAGGTTATTCAAGAATTCCTTTTAAACAAGGATAAATTTGGTGAAGTTATCAGGTACCAAGA
 CCTGATTTGTTATTGTTTCAGAGATTTACTCTTAAAAAATGGAGTGGCCCAATCACTATGCATGTGAGA
 AATTGCTGGTACTTTTGACCCATTATGACATGATAGAAAAGAAAGCTTGGTAGCAGAAAACCTAATCACT
 ACAGCCAATTCGAATTGTTAAGACTCGAATCAGAAATGGAGTTCATTGTTTTGAAATAGAATGGGAAAAG
 CCTGAACATTATGCTATGGAAGATAAACACATGGAGAATTTGCTTTTAAACAATTGAGGAAGAATCAT
 TGTTTTGAAAGCAGCATATCCTGAGATCGTTGCTGTTTACCAAAAACAAAAGTTAGAAATTAAGGGGAAGAA
 ACAAAAACGTATTAAGCCTAAAGAAAACAATTTGCCAGAACCAGATGAAGTAATGAGCTTTCAGTCACAC
 ATGACTTTAAAACCCACATGTGAAATCTTTCATAAGCAGAATTCGAAGTAAATTCGGGGATTTCCCTG
 ATCCTACATTACCACAGGAATCTATTTCTGCCTCATTGAATAGCTTGCTTTTACCTAAAAATACTCCATG
 TTTGAATGCACAAGAACAGTTCATGCTTCTCTAAGACCTTTGGCTATACAGCAAATTAAGCTGTCAGT
 AAGTCTCTAATTTAGAATCTAGTCAACCAATACCTCATCTCATAATATATCCGTGATTGCTGATCTAC
 ACTTGAGCACTATTGACTGGGAAGGTACTTCTTTTAGTAATTCTCCAGCTATTCAAAGGAATACTTTTTC
 TCATGATTTAAAAATCAGAAGTTGAATCAGAGCTATCAGCCATCCCTGATGGCTTTGAAAATATCCCAGAA
 CAACTGTCCTGTGAATCAGAAAGGTACTGCAACATAAAGAAAAGTGTGGATGAGGATTCGTATGGGA
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 CAGGAATCCCTTGCAAAATGAATCCAGAGACTCTAAAATCTAAAAGGAGACCAGCTGCTTCAAGAAGA
 CTATAAAGTCAATACTTCTGTCCCTTATTCTGTCAGTAACACAGTGGTAAAGACCTGCAATGTTAGACCA
 CCAAATACTGCTTTAGATCATAGTAGAAAAGTTGATATGCAAACCACTCGGAAAATTTTAAATGAAGAAGA
 GTGTTTGCCTTGACAGACATTCTCTGATGAACAAAGTGCCCCAGTGTGTTGGGAAAAGCTAAGTACACAAC
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 AAAGCTGTTTCCAGATTCACAAAAAGTTCTCTGAGTCTCTACAATGTCATAAGAAAAGAAAACAACCT
 TGGTACTGTTTGGATAGCCCTCTCTTTACGCCAGAGATTAAGTAAAGTTCCTCAAGCACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226255 representing NM_001130009
 Red=Cloning site Green=Tags(s)

MGVNDLWQILEPVKQHIPLRNLGGKTIIVDL SLVWCEAQTVKMMGSMKPHLRNLFRRISYLTQMDVKL
 VFVMEGEPKPKADVISKRNQTRYGSSGKSWSQKTGRSHFKSVLRECLHMLECLGIPWVQAAGEAEMCA
 YLNAGGHVDGCLTNDGDTFLYGAQTVYRNFTMNTKDPHVDCYTMSSIKSLGLDRDALVGLAILLGCDYL
 PKGVPVGKEQALKLIQILKQSLLRQFNWNETSCNSSPQLLVTKKLAHCSVCSPGSPKDHENGRCL
 CKSDKYCEPHDYEYCCPEWHRTEHDRQLNEVENNIKKKACCCEGFPFHEVIQEFLLNKDKLVKVIYRQR
 PDLLLQFRFTLEKMEWPNHYACEKLLVLLTHYDMIERKLSRNSNQLQPIRIVKTRIRNGVHCFEIEWEK
 PEHYAMEDKQHGEFALLTIEEESLFEAAYPEIVAVYQKQKLEIKGKKQKRIKPKENNLPEPDEVMSFQSH
 MTLKPTCEIFHKQNSKLSNGISPDPTLPQESISASLNSLLLKNTPLCLNAEQFMSSLRPLAIQQIKAVS
 KSLISESSQPNTSSHNISVIADLHLSTIDWEGTSFSNSPAIQRNTFSDHLKSEVESEL SAIPDGFENIPE
 QLSCESERYTANIKKVLDESDGISPEEHL LSGITDLCQLDPLKERIFTKLSYPQDNLQPDVNLKTL SI
 LSVKESCIANSGSDCTSHL SKDLPGIPLQNESRDSKILKGDQLLQEDYKVNTPVSVSNTVVKTCNVRP
 PNTALDHSRKVDMQTTRKILMKKSVCLDRHSSDEQSAPVFGKAKYTTQRMKHSSQKHNSSHFKESGHNKL
 SSPKIHKETEQCVRSYETAENEESC FPDSTKSSLSLQCHKENNSGTCLDSPLPLRQLKLRQST

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

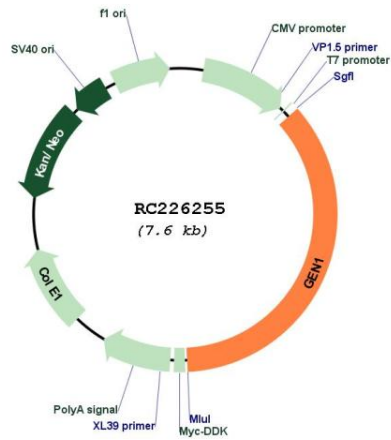


* The last codon before the Stop codon of the ORF

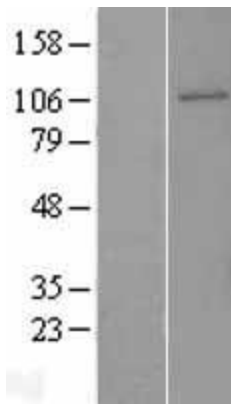
ACCN: NM_001130009

| | |
|-------------------------------|---|
| 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: | <ol style="list-style-type: none">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_001130009.3 |
| 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 RC226255



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]).