

Product datasheet for **MR227497**

Park2 (NM_016694) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | Park2 (NM_016694) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Park2 |
| Synonyms: | PRKN |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide Sequence:

>MR227497 representing NM_016694
 Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

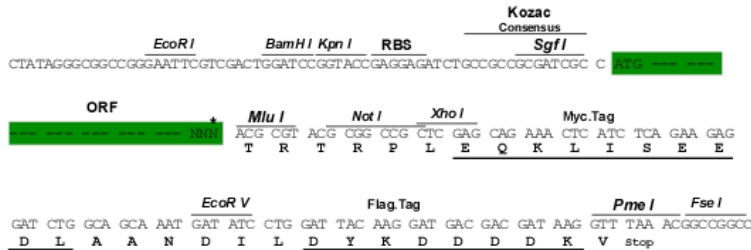
ATGATAGTGTGTTGTCAGGTTCAACTCCAGCTATGGCTTCCAGTGGAGGTCGATTCTGACACCAGCATCT
 TGCAGCTCAAGGAAGTGGTTGCTAAGCGACAGGGGTTCCAGCTGACCAGCTGCGTGTGATTTTTGCCGG
 GAAGGAGCTTCCGAATCACCTGACGTTCAAACTGTGACCTGGAACAACAGAGTATTGTACACATAGTA
 CAGAGACCACGGAGGAGAAGTCATGAAACAAATGCATCTGGAGGGGACGAACCCAGAGCACCTCAGAGG
 GCTCCATATGGGAGTCCAGGAGCTTGACACGAGTGGACCTGAGCAGCCATACCCTGCCGGTGGACTCTGT
 GGGGCTGGCGGTATTCTGGACACAGACAGTAAGAGGGATTGAGAAGCAGCCAGAGGTCCAGTTAAACCC
 ACCTACAACAGCTTTTTCATCTACTGCAAAGGCCCTGCCACAAGGTCCAGCCTGGAAAGCTCCGAGTTC
 AGTGTGGCACCTGCAAACAAGCAACCCACCTTGGCCCAGGGCCATCTTGTGGGACGATGTCTTAAT
 TCCAAACCGGATGAGTGGTGGTGGCAGTCTCCAGACTGCCCTGGAACCAGAGCTGAATTTTTCTTTAA
 TGTGGAGCACACCAACCTCAGACAAGGACACGTCCGGTAGCTTTGAACCTGATCACCAGCAACAGGGCGA
 GCATCCCTTGCATAGCGTGCACAGATGTCAGGAGCCCTGCTCTGGTCTTCCAGTGAACACCGTACGT
 GATCTGTTTGGACTGTTTCCACTTGTATTGTGTCACAAGACTCAACGATCGGCAGTGTGTCACGATGCT
 CAACTTGGCTACTCCCTGCCGTGTGTAGCTGGCTGTCCAACTCCCTGATTAAGAGCTCCATCACTTCA
 GGATCCTTGGAGAAGAGCAGTACACTAGGTACCAGCAGTATGGGGCCGAGGAATGCGTGTGCAAATGGG
 AGGTGTGCTGTGCCCCCTCTGGCTGTGGAGCTGGACTGCTACCTGAACAGGGCCAGAGGAAAGTACC
 TGCGAAGGGGGCAACGGCCTGGGCTGCGGGTTTGTCTTCTGCCGGACTGTAAGGAAGCATACCATGAAG
 GGGATTGCGACTCACTGCTCGAACCTCAGGACCCTTCTCAGGCCACAGGGTGGACAAAAGAGCCCGC
 TGAGCAAGCTCGCTGGGAGGAGGCTCCAAGGAAACCATCAAGAAGACCACCAAGCCTTGTCTCGCTGC
 AACGTGCCAATTGAAAAAACGGAGGATGTATGCACATGAAGTGTCTCAGCCCCAGTGAAGCTGGAGT
 GGTGCTGGAAGTGTGGCTGTGAGTGAACCGAGCCTGCATGGGAGTCACTGTTTGACGTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:
 Cloning Scheme:**

SgfI-MluI

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

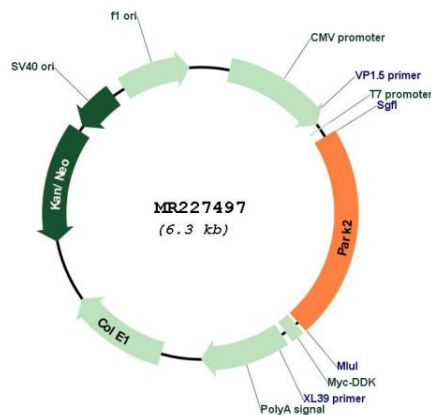
ACCN:

NM_016694

| | |
|-------------------------------|--|
| ORF Size: | 1392 bp |
| OTI Disclaimer: | <p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p> |
| 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_016694.4 |
| RefSeq Size: | 3202 bp |
| RefSeq ORF: | 1395 bp |
| Locus ID: | 50873 |
| UniProt ID: | Q9WVS6 |
| Cytogenetics: | 17 7.8 cM |
| MW: | 52.1 kDa |

Gene Summary:

Functions within a multiprotein E3 ubiquitin ligase complex, catalyzing the covalent attachment of ubiquitin moieties onto substrate proteins, such as BCL2, SYT11, CCNE1, GPR37, RHOT1/MIRO1, MFN1, MFN2, STUB1, SNCAIP, SEPTIN5, TOMM20, USP30, ZNF746 and AIMP2. Mediates monoubiquitination as well as 'Lys-6', 'Lys-11', 'Lys-48'-linked and 'Lys-63'-linked polyubiquitination of substrates depending on the context. Participates in the removal and/or detoxification of abnormally folded or damaged protein by mediating 'Lys-63'-linked polyubiquitination of misfolded proteins such as PARK7: 'Lys-63'-linked polyubiquitinated misfolded proteins are then recognized by HDAC6, leading to their recruitment to aggresomes, followed by degradation. Mediates 'Lys-63'-linked polyubiquitination of a 22 kDa O-linked glycosylated isoform of SNCAIP, possibly playing a role in Lewy-body formation. Mediates monoubiquitination of BCL2, thereby acting as a positive regulator of autophagy. Promotes the autophagic degradation of dysfunctional depolarized mitochondria (mitophagy) by promoting the ubiquitination of mitochondrial proteins such as TOMM20, RHOT1/MIRO1 and USP30. Preferentially assembles 'Lys-6', 'Lys-11' and 'Lys-63'-linked polyubiquitin chains following mitochondrial damage, leading to mitophagy. Mediates 'Lys-48'-linked polyubiquitination of ZNF746, followed by degradation of ZNF746 by the proteasome; possibly playing a role in the regulation of neuron death. Limits the production of reactive oxygen species (ROS). Regulates cyclin-E during neuronal apoptosis. In collaboration with CHPF isoform 2, may enhance cell viability and protect cells from oxidative stress. Independently of its ubiquitin ligase activity, protects from apoptosis by the transcriptional repression of p53/TP53. May protect neurons against alpha synuclein toxicity, proteasomal dysfunction, GPR37 accumulation, and kainate-induced excitotoxicity. May play a role in controlling neurotransmitter trafficking at the presynaptic terminal and in calcium-dependent exocytosis. May represent a tumor suppressor gene.[UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MR227497