

Product datasheet for **MC216304**

Park2 (NM_016694) Mouse Untagged Clone

Product data:

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



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Fully Sequenced ORF: >MC216304 representing NM_016694
 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGATAGTGTGTTGTCAGGTTCAACTCCAGCTATGGCTTCCAGTGGAGGTCGATTCTGACACCAGCATCT
 TGCAGCTCAAGGAAGTGGTTGCTAAGCGACAGGGGTTCCAGCTGACCAGCTGCGTGTGATTTTTGCCGG
 GAAGGAGCTTCCGAATCACCTGACGGTTCAAACTGTGACCTGGAACAACAGAGTATTGTACACATAGTA
 CAGAGACCACGGAGGAGAAGTCATGAAACAAATGCATCTGGAGGGGACGAACCCAGAGCACCTCAGAGG
 GCTCCATATGGGAGTCCAGGAGCTTGACACGAGTGGACCTGAGCAGCCATACCCTGCCGGTGGACTCTGT
 GGGGCTGGCGGTATTCTGGACACAGACAGTAAGAGGGATTGAGAAGCAGCCAGAGGTCCAGTTAAACCC
 ACCTACAACAGCTTTTTCATCTACTGCAAGGCCCTGCCACAAGGTCCAGCCTGGAAAGCTCCGAGTTC
 AGTGTGGCACCTGCAACAAGCAACCCTCACCTTGGCCAGGGCCCATCTTGCTGGGACGATGTCTTAAT
 TCCAAACCGGATGAGTGGTGAGTGCCAGTCTCCAGACTGCCCTGGAACCAGAGCTGAATTTTTCTTTAA
 TGTGGAGCACACCAACCTCAGACAAGGACACGTCGGTAGCTTTGAACCTGATCACCAGCAACAGGCGCA
 GCATCCCTTGCATAGCGTGACAGATGTGAGGAGCCCTGTCTGGTCTTCCAGTGTAAACCACCGTACGT
 GATCTGTTTGGACTGTTTCCACTTGTATTGTGTCACAAGACTCAACGATCGGCAGTGTGTCACGATGCT
 CAACTTGGCTACTCCCTGCCGTGTGTAGCTGGCTGTCCCAACTCCCTGATTAAAGAGCTCCATCACTTCA
 GGATCCTTGGAGAAGAGCAGTACACTAGGTACCAGCAGTATGGGGCCGAGGAATGCGTGTGCAATGGG
 AGGTGTGCTGTGCCCCGTCTGGCTGTGGAGCTGGACTGCTACCTGAACAGGGCCAGAGGAAAGTCACC
 TGCGAAGGGGGCAACGGCCTGGGCTGCGGGTTTGTCTGCGGGACTGTAAGGAAGCATACCATGAAG
 GGGATTGCGACTACTGCTCGAACCTCAGGAGCCACTTCTCAGGCCTACAGGTGGACAAAAGAGCCGC
 TGAGCAAGCTCGCTGGGAGGAGGCTCCAAGAAACCATCAAGAAGACCACCAAGCCTTGTCTCGCTGC
 AACGTGCCAATTGAAAAAACGGAGGATGTATGCACATGAAGTGTCTCAGCCCCAGTGAAGCTGGAGT
 GGTGCTGGAAGTGGCTGTGAGTGGAACCGAGCCTGCATGGGAGTCACTGGTTTGACGTGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_016694

Insert Size: 1395 bp

OTI Disclaimer: 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.

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](#)

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [BC113204](#), [AAI13205](#)

RefSeq Size: 2699 bp

RefSeq ORF: 1395 bp

Locus ID: 50873

UniProt ID: [Q9WVS6](#)

Cytogenetics: 17 7.8 cM

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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.