

## Product datasheet for **RG207085**

### PARP1 (NM\_001618) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PARP1 (NM_001618) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PARP1
Synonyms:	ADPRT; ADPRT 1; ADPRT1; ARTD1; pADPRT-1; PARP; PARP-1; PPOL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG207085 representing NM_001618 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGAGTCTTCGGATAAGCTCTATCGAGTCGAGTACGCCAAGAGCGGGCGGCCTCTTGAAGAAAT  
GCAGCGAGAGCATCCCCAAGGACTCGCTCCGGATGGCCATCATGGTGCAGTCGCCATGTTTGATGGAAA  
AGTCCCACACTGGTACCCTTCTCCTGCTTCTGGAAGGTGGGCCACTCCATCCGGCACCTGACGTTGAG  
GTGGATGGTTCTCTGAGCTTCGGTGGGATGATCAGCAGAAAGTCAAGAAGACAGCGGAAGCTGGAGGAG  
TGACAGGCAAAGGCCAGGATGGAATTGGTAGCAAGGCAGAGAAGACTCTGGGTGACTTTGCAGCAGAGTA  
TGCCAAGTCCAACAGAAGTACGTGCAAGGGTGTATGGAGAAGATAGAAAAGGGCCAGGTGCGCCTGTCC  
AAGAAGATGGTGGACCCGGAGAAGCCACAGCTAGGCATGATTGACCGCTGGTACCATCCAGGCTGCTTTG  
TCAAGAACAGGGAGGAGCTGGGTTTCCGGCCCGAGTACAGTGCAGTCAAGGCTTCAAGGCTTCAAGGCT  
TGCTACAGAGGATAAAGAAGCCCTGAAGAAGCAGCTCCCAGGAGTCAAGAGTGAAGGAAAGAGAAAAGGC  
GATGAGGTGGATGGAGTGGATGAAGTGGCGAAGAAGAAATCTAAAAAAGAAAAAGACAAGGATAGTAAGC  
TTGAAAAAGCCCTAAAGGCTCAGAACGACCTGATCTGGAACATCAAGGACGAGCTAAAGAAAGTGTGTT  
GACCGAGTAGCCGATGGCATGGTGTTCGGTCCCTCCTTCCCTGCGAGGAATGCTCGGGCAGCTGGTCT  
TCAAGAGCGATGCCTATTACTGCACTGGGGACGTCAGTGCCTGGACCAAGTGTATGGTCAAGACACAGAC  
ACCCAACCGGAAGGAGTGGGTAACCCCAAAGGAATTCCGAGAAATCTCTTACCTCAAGAAATGAAGGTT  
AAAAAACAGGACCGTATATCCCCCAAGAAACCAGCGCTCCGTGGCGGCCACGCTCCGCCCTCCACAG  
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GGGACGGCCAACAAGGCTCCCTGTGCATCAGCACAAAAGGAGGTGAAAAGATGAATAAGAAGATGG  
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GAGCCTCAGGAGTTGTTCTTAGCGCACATCTGTCCCTTGGGGGCAGAGGTGAAGGCAGAGCCTGTT



GAAGTTGTGGCCCAAGAGGGAAGTCAGGGGCTGCGCTCTCAAAAAAGCAAGGGCCAGGTCAAGGAGG  
 AAGGTATCAACAAATCTGAAAAGAGAATGAAATTAACCTTAAAGGAGGAGCAGCTGTGGATCCTGATTC  
 TGGACTGGAACACTCTGCGCATGTCTGGAGAAAGGTGGGAAGGTCTTCAGTGCCACCCTTGGCCTGGT  
 GACATCGTTAAAGGAACCACTCTACTACAAGCTGCAGCTTCTGGAGGACGACAAGGAAAAACAGGTATT  
 GGATATTCAGGTCTGGGGCCGTGTGGGTACGGTGATCGGTAGCAACAACTGGAACAGATGCCGTCCAA  
 GGAGGATGCCATTGAGCACTTCATGAAATATATGAAGAAAAACCGGGAACGCTTGGCACTCCAAAAAT  
 TTCACGAAGTATCCCAAAAAGTTCTACCCCTGGAGATTGACTATGGCCAGGATGAAGAGGCAGTGAAGA  
 AGCTGACAGTAAATCCTGGCACCAAGTCCAAGCTCCCAAGCAGTTCAGGACCTCATCAAGATGATCTT  
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 CGTGAAGGCGAATGCCAGCGTTACAAGCCTTTAAGCAGCTTCATAACCGAAGATTGCTGTGGCAGGGGT  
 CCAGGACCACCAACTTGTCTGGGATCCTGTCCCAGGGTCTTCGGATAGCCCCGCCTGAAGCGCCCGTGAC  
 AGGCTACATGTTTGGTAAAGGGATCTATTTGCTGACATGGTCTCCAAGAGTGCCAACTACTGCCATACG  
 TCTCAGGGAGACCAATAGGCTTAATCCTGTTGGGAGAAGTTGCCTTGGAAACATGATGAACTGAAGC  
 ACGCTTACATATCAGCAAGTTACCAAGGGCAAGCACAGTGTCAAAGGTTTGGGCAAACTACCCCTGA  
 TCCTTCAGCTAACATTAGTCTGGATGGTGTAGACGTTCTCTTGGGACCGGGATTTCATCTGGTGTGAAT  
 GACACCTCTACTATATAACGAGTACATTGTCTATGATATTGCTCAGGTAATCTGAAGTATCTGCTGA  
 AACTGAAATTCATTTTAAGACCTCCCTGTGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG207085 representing NM\_001618  
 Red=Cloning site Green=Tags(s)

MAESSDKLYRVEYAKSGRASCKKCESEIPKDSLRLMIMVQSPMFDGKVPWHYHFSFVWVGHHSIRHPDVE  
 VDGFSSELRWDDQKVKKTAEGGVGTGKGQDGIKSKAEKTLGDFAAEYAKSNRSTCKGMEKIEKGQVRLS  
 KKMVDPEKPLGMIDRWYHPGCFVKNREELGFRPEYSASQLKGFSLLATDKEALKKQLPGVKSEGKRKG  
 DEVDGVDEVAKKSKKEKDKSKLEKALKQNLDIWNIDELKVKCSTNDLKELLIFNKQVPSGESAIL  
 DRVADGMVFGALLPCEECGQLVFKSDAYYCTGDVTAWTKCMVKTQTPNRKEWVTPKEFREISYLKLLKV  
 KKQDRIFPPETSASVAATPPPSTASAPAAVNSSASADKPLSNMKILTLGKLSRNKDEVKAMIEKLGKLT  
 GTANKASLCISTKKEVEKMNMKMEVKEANIRVVEDFLQDVSASTKSLQELFLAHLSPWGAEVKAEPV  
 EVVAPRGKSGAALSKKSKGQVKEEGINKSEKRMKLTGKGAAVDPDGLSLEHSAHVLEKGGKVFATLGLV  
 DIVKGTNSYYKLQLEDDKENRYWIFRSWGRVGTVIGSNKLEQMPKEDAIHFMKLYEEKTGNAWHNSKN  
 FTKYKPFYPLEIDYQDDEEAVKCLTVNPGTKSKLPKPVQDLIKMIFDVESMCKAMVEYEIDLQKMPGLK  
 LSKRQIQAAYSILSEVQQAQVSGSSDSQILDLSNRFYTLIPHDFGMKPPLLNNADSVQAKAEMLDNLLD  
 IEVAYSLLRGSSDSSKDPIDVNYEKLTDIKVVDRESEAEIRKYVKNTHATTHNAYDLEVIDIFKIE  
 REGECQRYKPFKQLHNRRLWHGSRTTNFAGILSQGLRIAPPEAPVTGYMFGKGIYFADMVSKSANYCHT  
 SQGDPILGILLGEVALGNMYELKHASHISKLPKGKHSVKGLGKTPDPSANISLDGVDVPLGTGISSGVN  
 DTSLLYNEYIVYDIAQVNLKYLKLFNFKTSW

TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001618

ORF Size: 3042 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](mailto: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](#)

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\\_001618.2](#), [NP\\_001609.1](#)

**RefSeq Size:** 3859 bp

**RefSeq ORF:** 3045 bp

**Locus ID:** 142

**UniProt ID:** [P09874](#)

**Cytogenetics:** 1q42.12

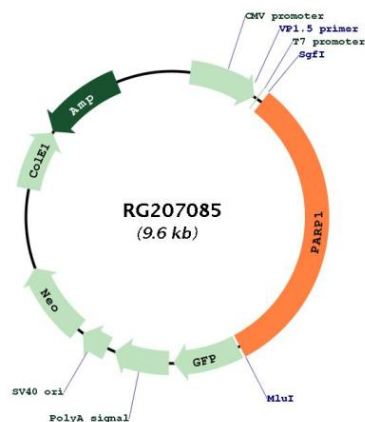
**Domains:** PARP, BRCT, zf-PARP, PARP\_reg

**Protein Families:** Druggable Genome, Stem cell - Pluripotency, Transcription Factors

**Protein Pathways:** Base excision repair

**Gene Summary:** This gene encodes a chromatin-associated enzyme, poly(ADP-ribose)transferase, which modifies various nuclear proteins by poly(ADP-ribose)ation. The modification is dependent on DNA and is involved in the regulation of various important cellular processes such as differentiation, proliferation, and tumor transformation and also in the regulation of the molecular events involved in the recovery of cell from DNA damage. In addition, this enzyme may be the site of mutation in Fanconi anemia, and may participate in the pathophysiology of type I diabetes. [provided by RefSeq, Jul 2008]

### Product images:



Circular map for RG207085