

Product datasheet for **KN207085**

PARP1 Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	PARP1
Locus ID:	142
Components:	<p>KN207085G1, PARP1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CGAGTCGAGTACGCCAAGAG</p> <p>KN207085G2, PARP1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GAGTCGAGTACGCCAAGAGC</p> <p>KN207085D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

```
GGTGTCCGGG CGCAGCCATG ACCCAGTCAC GTAGCGATAG CGGAGTGTAT ACTGGCTTAA CTATGCGGCA
TCAGAGCAGA TTGTAAGTAC AGTGCACCAT ATGCGGTGTG AAATACCGCA CAGATGCGTA AGGAGAAAAT
ACCGCATCAG GCGCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG GTCGTTCCGC TCGCGCGAGC
GGTATCAGCT CACTCAAAGG CGGTAATACG GTTATCCACA GAATCAGGGG ATAACGCAGG AAAGAACATG
TGAGCAAAAAG GCCAGCAAAA GGCCAGGAAC CGTAAAAAAG CCGCGTTGCT GGCGTTTTTC CATAGGCTCC
GCCCCCTGA CGAGCATCAC AAAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG
ATACCAGGCG TTTCCCTCTG GAAGCTCCCT CGTGCCTCTT CCTGTTCCGA CCCTGCCGCT TACCGGATAC
CTGTCCGCTT TTCTCCCTTC GGGAAAGCGTG GCGCTTTCTC ATAGCTCACG CTGTAGGTAT CTCAGTTCGG
TGTAGGTCGT TCGCTCCAAG CTGGGCTGTG TGCACGAACC CCCCCTTCAG CCCGACCGCT GCGCCTTATC
CGGTAAGTAT CGTCTTGAGT CCAACCCGGT AAGACACGAC TTATCGCCAC TGGCAGCAGC CACTGGTAAC
AGGATTAGCA GAGCGAGGTA TGTAGGCGGT GCTACAGAGT TCTTGAAGTG GTGGCCTAAC TACGGCTACA
CTAGAAGGAC AGTATTTGGT ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GAAAAAAGAG TTGGTAGCTC
TTGATCCGCG AAACAAACCA CCGCTGGTAG CGGTGGTTTT TTTGTTTGA AGCAGCAGAT TACGCGCAGA
AAAAAAGGAT CTCAAGAAGA TCCTTTGATC TTTTCTACGG GGTCTGACGC TCAGTGGAAAC GAAAACCTCAC
GTTAAGGGAT TTTGGTCAATG AGATTATCAA AAAGGATCTT CACCTAGATC CTTTTAAATT AAAAATGAAG
TTTTAAATCA ATCTAAAGTA TATATGAGTA AACTTGGTCT GACAGTTACC AATGCTTAAT CAGTGAGGCA
CCTATCTCAG CGATCTGTCT ATTTCTGTTA TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACTACGA
TACGGGAGGG CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAC CCACGCCTAC CGGCTCCAGA
TTTATCAGCA ATAAACCAGC CAGCCGGAAG GGCCGAGCGC AGAAGTGGTC CTGCAACTTT ATCCGCCTCC
ATCCAGTCTA TTAATTGTTG CCGGGAAGCT AGAGTAAGTA GTTCGCCAGT TAATAGTTTG CGCAACGTTG
TTGCCATTGC TGCAGGCATC GTGGTGTAC GCTCGTCTGT TGGTATGGCT TCATTTCAGT CCGGTTCCCA
ACGATCAAGG CGAGTTACAT GATCCCCAT GTTGTGCAAA AAAGCGGTTA GCTCCTTCGG TCTCCGATC
GTTGTCAGAA GTAAGTTGGC CGCAGTGTTA TCACTCATGG TTATGGCAGC ACTGCATAAT TCTCTTACTG
```



TCATGCCATC CGTAAGATGC TTTTCTGTGA CTGGTGAGTA CTCAACCAAG TCATTCTGAG AATAGTGTAT
 GCGGCGACCG AGTTGCTCTT GCCCGGCGTC AACACGGGAT AATACCGCGC CACATAGCAG AACTTTAAAA
 GTGCTCATCA TTGGAAAACG TTCTTCGGGG CGAAAACCTT CAAGGATCTT ACCGCTGTTG AGATCCAGTT
 CGATGTAACC CACTCGTGCA CCCAACTGAT CTTCAGCATC TTTTACTTTC ACCAGCGTTT CTGGGTGAGC
 AAAAACAGGA AGGCAAAATG CCGCAAAAAA GGAATAAAGG GCGACACGGA AATGTTGAAT ACTCATACTC
 TTCCTTTTTT AATATTATTG AAGCATTTAT CAGGGTTATT **BCCAGTTGTG** **GTGAGCGCT** **GTAGTCCCAG**
CTACTCGGGA **GGCTGAGGTG** **GGAGATCGC** **TGGGCTCAGG** **AGTTCAGAG** **TGCAGTGAGC** **CATGATGGCG**
GCACTGCACT **CCAGCGCGGT** **GAGACTCAGT** **CTCAAAAATA** **AAAGGGGGAG** **GGGTTGGGGG** **TAAAATTAGT**
TGTGAAATCA **AGTAAGACTT** **CCTGGGACAG** **AACAATCAAA** **GGGGTGCGC** **CGGGTCTCTC** **AAAGAGCTAC**
TAGCTCAGCC **CAAGCCCCGC** **CTCGGCCCCC** **AGGGCAGCGG** **CCCGCAGAGC** **TCCACCCGCG** **AGGCGCCCCG**
GAAACTCCGC **CCCCGGCCG** **GCAGGGGGCG** **CGCGCGCCGC** **CGGCCCCGCC** **CCGTGGACGC** **GGGTTCCGTG**
GGCGTTCCCG **CGCCAGGCA** **TCAGCAATCT** **ATCAGGGAAC** **GGCGGTGGCC** **GGTGCGGCGT** **GTTCCGTGGC**
GGCTCTGGCC **GCTCAGGCGC** **CTGCGGCTGG** **GTGAGCGCAC** **GCGAGGCGGC** **GAGGCGGCAG** **CGTGTTTCTA**
GGTCGTGGCG **TCGGGCTTCC** **GGAGCTTTGG** **CGGCAGCTAG** **GGGAGGACTA** **GCATGGAGAG** **CGACGAGAGC**
GGCCTGCCCG **CCATGGAGAT** **CGAGTGCCGC** **ATCACCGGCA** **CCCTGAACGG** **CGTGGAGTTC** **GAGCTGGTGG**
GCGGCGGAGA **GGGCACCCCG** **GAGCAGGGCC** **GCATGACCAA** **CAAGATGAAG** **AGCACCAAAG** **GCGCCCTGAC**
CTTCAGCCCC **TACCTGCTGA** **GCCACGTGAT** **GGGCTACGGC** **TTCTACCACT** **TCGGCACCTA** **CCCCAGCGGC**
TACGAGAACC **CCTTCCTGCA** **CGCCATCAAC** **AACGGCGGCT** **ACACCAACAC** **CCGCATCGAG** **AAGTACGAGG**
ACGGCGGCGT **GCTGCACGTG** **AGCTTCAGCT** **ACCGCTACGA** **GGCCGGCCCG** **GTGATCGGCG** **ACTTCAAGGT**
GATGGGCACC **GGCTTCCCCG** **AGGACAGCGT** **GATCTTCACC** **GACAAGATCA** **TCCGCAGCAA** **CGCCACCGTG**
GAGCACCTGC **ACCCATGGG** **CGATAACGAT** **CTGGATGGCA** **GCTTCACCCG** **CACCTTCAGC** **CTGCGCGACG**
GCGGCTACTA **CAGCTCCGTG** **GTGGACAGCC** **ACATGCACTT** **CAAGAGCGCC** **ATCCACCCCA** **GCATCTTGCA**
GAACGGGGGC **CCCATGTTCC** **CCTTCCGCGC** **CGTGGAGGAG** **GATCACAGCA** **ACACCGAGCT** **GGGCATCGTG**
GAGTACCAGC **ACGCCTTCAA** **GACCCCGGAT** **GCAGATGCCG** **GTGAAGAAAG** **AGTTTAAAGAA** **TTCCGATCAT**
ATTCAATAAC **CCTTAATATA** **ACTTCGTATA** **ATGTATGCTA** **TACGAAGTTA** **TTAGGTCTGA** **AGAGGAGTTT**
ACGTCCAGCC **AAGCTTAGGA** **TCTCGACCTC** **GAAATTCTAC** **CGGGTAGGGG** **AGGCGCTTTT** **CCCAAGGCAG**
TCTGGAGCAT **GCGCTTAGC** **AGCCCCGCTG** **GGCACTTGGC** **GCTACACAAG** **TGGCCTCTGG** **CCTCGCACAC**
ATTCCACATC **CACCGGTAGG** **CGCCAACCGA** **CTCCGTTCTT** **TGGTGGCCCC** **TTCGCGCCAC** **CTTCTACTCC**
TCCCTAGTC **AGGAAGTCC** **CCCCGCCCC** **GCAGCTCGCG** **TCGTGCAGGA** **CGTGACAAAT** **GGAAGTAGCA**
CGTCTCACTA **GTCTCGTGCA** **GATGGACAGC** **ACCGCTGAGC** **AATGGAAGCG** **GGTAGGCCTT** **TGGGGCAGCG**
GCCAATAGCA **GCTTTGCTCC** **TTCGCTTTCT** **GGGCTCAGAG** **GCTGGGAAGG** **GGTGGGTCCG** **GGGGCGGGCT**
CAGGGGCGGG **CTCAGGGGCG** **GGGCGGGCGC** **CCGAAGTCC** **TCCGGAGGCC** **CGGCATTCTG** **CACGCTTCAA**
AAGCGCACGT **CTGCCGCGCT** **GTTCTCCTCT** **TCCTCATCTC** **CGGGCCTTTC** **GACCTGCATC** **CATCTAGATC**
TCGAGCAGCT **GAAGCTTACC** **ATGACCGAGT** **ACAAGCCAC** **GGTGCGCCTC** **GCCACCCGCG** **ACGACGTCCC**
CAGGGCCGTA **CGCACCCCTG** **CCGCCGCGTT** **CGCCGACTAC** **CCCCCACGC** **GCCACACCGT** **CGATCCGGAC**
CGCCACATCG **AGCGGGTCAC** **CGAGCTGCAA** **GAACTCTTCC** **TCACGCGCGT** **CGGGCTCGAC** **ATCGGCAAGG**
TGTGGGTCGC **GGACGACGGC** **GCCGCGGTGG** **CGGTCTGGAC** **CACGCCGGAG** **AGCGTCGAAG** **CGGGGGCGGT**
GTTCCGCCGAG **ATCGGCCCGC** **GCATGGCCGA** **GTTGAGCGGT** **TCCCGGCTGG** **CCGCGCAGCA** **ACAGATGGAA**
GGCCTCCTGG **CGCCGACCCG** **GCCCAAGGAG** **CCCGCGTGGT** **TCCTGGCCAC** **CGTCGGCGTC** **TCGCCCGACC**
ACCAGGGCAA **GGGTCTGGGC** **AGCGCCGTCG** **TGCTCCCGG** **AGTGAGGCG** **GCCGAGCGCG** **CCGGGGTGCC**
CGCCTTCTG **GAGACCTCCG** **CGCCCCACAA** **CCTCCCCCTC** **TACGAGCGGC** **TCGGGTTTAC** **CGTCACCGCC**
GACGTCGAGG **TGCCCGAAGG** **ACCGCGCACC** **TGGTGCATGA** **CCCGLAAGCC** **CGGTGCCTGA** **CGCCCCCCCC**
ACGACCCGCA **GCGCCCCACC** **GAAAGGAGCG** **CACGACCCCA** **TGCATCGATG** **ATATCAGATC** **CCCGGGATGC**
AGAAATTGAT **GATCTATTAA** **ACAATAAAGA** **TGTCCACTAA** **AATGGAAGTT** **TTTCTGTCA** **TACTTTGTTA**
AGAAGGGTGA **GAACAGAGTA** **CCTACATTTT** **GAATGGAAGG** **ATTGGAGCTA** **CGGGGGTGGG** **GGTGGGGTGG**
GATTAGATAA **ATGCCTGCTC** **TTTACTGAAG** **GCTCTTACT** **ATTGCTTAT** **GATAATGTTT** **CATAGTTGGA**
TATCATAATT **TAAACAAGCA** **AAACCAAATT** **AAGGGCCAGC** **TCATTCCTCC** **CACTCATGAT** **CTATAGATCT**
ATAGATCTCT **CGTGGGATCA** **TTGTTTTTCT** **CTTGATTCCC** **ACTTTGTGGT** **TCTAAGTACT** **GTGGTTTCCA**
AATGTGTGAG **TTTCATAGCC** **TGAAGAACGA** **GATCAGCAGC** **CTCTGTTCCA** **CATACACTTC** **ATTCTCAGTA**
TTGTTTTGCC **AAGTTCTAAT** **TCCATCAGAA** **GCTGGTCGAG** **ATCCGGAACC** **CTTAATATAA** **CTTCGTATAA**
TGTATGCTAT **ACGAAGTTAT** **TAGGTCCCTC** **GAAGAGGTTT** **ACTAGGCGCG** **CCTGGCCATC** **ATGGTGACGG**
TGCGGGCCGC **TGTGCGGGCG** **GCGGGGCGGG** **GACGCGGCGC** **CCCGGGTTAA** **CTGTGTCGGG** **GAAGGCTGGG**

```

GGAGGGCGGG CCCAGGGAGC GAGCGGGCCC GGGCCCTCGG AGCGGCACTT GGGGCCTATG GGGCCGCGGC
CGCCCCTCCT CCGGAGCGGC CCGGCCGACC CTTCGGGAA GTTTTGCTGA TGTTGCAGGA AAAGCCCGGG
AAATAAAGTC TGCAGCTGGT GTTGCCTTTC GCTTTGTGAA AACGAGGAGC CTCTTCTCTT CTCCTTTCTG
GGTGGCGGTG TTTTATTACT GCCGTTCCGC TCAGGGGTTG GGGGGGAATT GTACATGGTC TCTTTAAGCT
AATCTGATTT TGACCTATCT TGTTCTGGAG GGTTTTTGT CTACATGGAT GGTGGCGACT GACATGTGGG
TTTTTTTTTT TTTTGTAAA CCTATTTTTG GCAGTCATT CAACACGTCA TTTAAACGCT CACTCTCATT
TTTTATTTTA ATTAGGCAGA ACTATGCAGA AAGGTGTCAT TTCTGTACAG TACATTCACT TTGAGCCTAA
TTTGTGCTTT AAAGTAACAT TTTCCACAGT CTTCACTGAC TGACTIONG GAAAGAGGAA GGGCTGGAAG
AGGAAGGAGC TTTAATGCGG TAGTTTATCA CAGTTAAATT GCTAACGCAG TCAGGCACCG TGTATGAAAT
CTAACATGC GCTCATCGTC ATCCTCGGCA CCGTCACCC TGGATGCTGTA GGCATAGGCT TGGTTATGCC
GGTACTGCCG GGCCTCTTGC GGGATATCGT CCATTCCGAC AGCATCGCCA GTCACTATGG CGTGCTGCTA
GCGCTATATG CGTTGATGCA ATTTCTATGC GCACCCGTTT TCGGAGCACT GTCCGACCGC TTTGGCCGCC
GCCAGTCCT GCTCGTTCG CTACTIONG CCACTATCGA CTACGCGATC ATGGCGACCA CACCCGTCCT
GTGGATCCTC TACGCCGAC GCATCGTGGC CGGCATACC GGCGCCACAG GTGCGGTTG TGGCGCCTAT
ATCGCCGACA TCACCGATGG GGAAGATCGG GCTCGCCACT TCGGGCTCAT GAGCGTTGT TTCGGCGTGG
GTATGGTGGC AGGCCCCGTG GCCGGGGGAC TGTGGGGCGC CATCTCCTTG CATGCACCAT TCCTTGCGGC
GGCGGTGCTC AACGGCCTCA ACCTACTACT GGGCTGCTT CTAATGCAGG AGTCGCATAA GGGAGAGCGT
CGACCGATGC CTTGAGAGC CTTCAACCCA GTCAGCTCCT TCCGGTGGG GCGGGGCATG ACTATCGTCG
CCGCACTTAT GACTGTCTT TTTATCATGC AACTCGTAGG ACAGGTGCCG GCAGCGCTCT GGGTCATTTT
CGGCGAGGAC CGTTTTCGCT GGAGCGCGAC GATGATCGGC CTGTGCTTG CGGTATTCGG AATCTTGAC
GCCCTCGCTC AAGCCTTCGT CACTGGTCCC GCCACCAAC GTTTCGGCGA GAAGCAGGCC ATTATCGCCG
GCATGGCGGC CGACGCGCTG GGCTACGTCT TGCTGGCGTT CGCGACGCGA GGCTGGATGG CCTTCCCAT
TATGATTCTT CTCGTTCCG GCGGCATCGG GATGCCCGG TTGACGGCCA TGCTGTCCAG GCAGGTAGAT
GACGACCATC AGGGACAGCT TCAAGGATCG CTCGCGGCTC TTACCAGCCT AACTTCGATC ACTGGACCGC
TGATCGTAC GCGGATTTAT GCCGCCTCGG CGAGCACATG GAACGGGTTG GCATGGATTG TAGGCGCCG
CCTATACCTT GTCTGCCTCC CCGCGTTGCG TCGCGGTGCA TGGAGCCGGG CCACCTCGAC CTGAATGGAA
GCCGGCGGCA CCTCGCTAAC GGATTCACCA CTCCAAGAAT TGGAGCCAAT CAATTCTTGC GGAGAAGTGT
GAATGCGCAA ACCAACCTT GGCAGAACAT ATCCATCGCG TCCGCCATCT CCAGCAGCCG CACGCGGCGC
ATCTCGGCA GCGTTGGGTC CTGGCCACGG GTGCGCATGA TCGTGCTCT GTCGTTGAGG ACCCGGCTAG
GCTGGCGGGG TTGCCTTACT GGTTAGCAGA ATGAATCACC GATACGCGAG CGAACGTGAA GCGACTGCTG
CTGAAAACG TCTGCGACCT GAGCAACAAC ATGAATGGTC TTCGGTTTCC GTGTTTCGTA AAGTCTGGAA
ACGCGGAAGT CAGCGCCCTG CACCATTATG TTCCGGATCT GCATCGCAGG ATGCTGCTGG CTACCCGTG
GAACACCTAC ATCTGTATTA ACGAAGCGCT GGCATTGACC CTGAGTGATT TTTCTCTGGT CCCGCCGAT
CCATACCGCC AGTTGTTTAC CCTCACAACG TTCCAGTAAC CGGGCATGTT CATCATCAGT AACCCGTATC
GTGAGCATCC TCTCTGTTT CATCGGTATC ATTACCCCA TGAACAGAAA TCCCCCTTAC ACGGAGGCAT
CAGTGACCAA ACAGAAAAA ACCGCCCTTA ACATGGCCCG CTTTATCAGA AGCCAGACAT TA

```

GE100003, scramble sequence in pCas-Guide vector

Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_001618](#)

UniProt ID:

[P09874](#)

Synonyms:

ADPRT; ADPRT 1; ADPRT1; ARTD1; pADPRT-1; PARP; PARP-1; PPOL

Summary:

This gene encodes a chromatin-associated enzyme, poly(ADP-ribosyl)transferase, which modifies various nuclear proteins by poly(ADP-ribosyl)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:

