

Product datasheet for **RG229020**

PARP9 (NM_001146105) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PARP9 (NM_001146105) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PARP9
Synonyms:	ARTD9; BAL; BAL1; MGC:7868
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG229020 representing NM_001146105
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACTTTTCCATGGTGCCGGAGCAGCAGCTTACAATGAAAAATCAGAGACTGGTGCTCTTGAGAAA
 ACTATAGTTGGCAAATCCCATTAACCACAATGACTTCAAAATTTAAAAATAATGAGCGTCAGCTGTG
 TGAAGTCTCCAGAATAAGTTTGGCTGTATCTCTACCCTGGTCTCTCCAGTTCAGGAAGGCAACAGCAAA
 TCTCTGCAAGTGTTCAGAAAAATGCTGACTCCTAGGATAGAGTTATCAGTCTGAAAAGATGACCTCACCA
 CACATGCTGTTGATGCTGTGGTGAATGCAGCCAATGAAGATCTTCTGCATGGGGGAGGCCTGGCCCTGGC
 CCTGGTAAAAGCTGGTGGATTTGAAATCCAAGAAGAGAGCAAACAGTTTGTGGCCAGATATGGTAAAGTG
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 TTGTTCTGTAATATATACCATGTACTGTGGCATTGAGAATTTCCCTAAACCTCAGATATTAACATG
 CAATGAAGGAGTGTGGAAAAATGCATTGAGCAAAAATAACTTCCATTTCCCTTCCGCTTGGGAC
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 GTTATTTTTAGTGGCATGCAGGCTATACCTCAGTATTTGTGGACATGCACCCAGGAATATGTACAGTAC
 AAGATTACTCATCAGGACCAATGAGACCCTTTCACAGCATCCTTGGAGGGGATTCGCAAGTGGCAGCCC
 TGTTGAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG229020 representing NM_001146105
 Red=Cloning site Green=Tags(s)

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MDFSMVAGAAAYNEKSETGALGENYSWQIPINHDFKILKNNERQLCEVLQNKFGCISTLVSPVQEGNSK
SLQVFRKMLTPRIELSVWKDDLTTHAVDAVVNAANEDLLHGGGLALALVKAGGFEIQEESKQFVARYGKV
SAGEIAVTGAGRLPCKQIIHAVGPRWMEWDKQGCTGKLRRAIVSILNYVIYKNTHIKTVAIPALSSGIFQ
FPLNLCTKTIVETIRVSLQGKPMMSNLKEIHLVSNEDPTVAAFKAASEFILGKSELGQETTPSFNAMVVN
NLTLQIVQGHIEWQTADVI VNSVNP HDITVGPVAKSILQQAGVEMKSEFLATKAKQFQRSQLVLVTGKFN
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VVMNIEDMLCKVQEEMARKKERGLWRS LGQWTIQQKTQDEMKENIIFLKCPVPPTQELLDQKKQFEKCG
LQVLKVEKIDNEV LMAAFQRKKMMEEKLHRQPVSHRLFQQVPYQFCNVVCRVGFQRMYSTPCDPKYGAG
IYFTKNLKNLAEKAKKISAADKLIYVFEAEVLTGFFCQGHPLNIVPPPLSPGAIDGHDSVVDNVSSPETF
VIFSGMQAIPQYLWTCTQEYVQSQDYSSGPMRPF AQHPWRGFASGSPVD
  
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TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001146105

ORF Size: 2457 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:

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_001146105.2](#)

RefSeq Size: 3072 bp

RefSeq ORF: 2460 bp

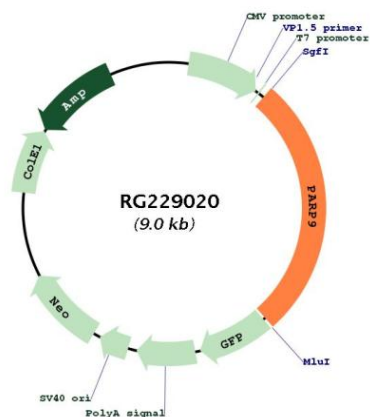
Locus ID: 83666

UniProt ID: [Q8IXQ6](#)

Cytogenetics: 3q21.1

Gene Summary: ADP-ribosyltransferase which, in association with E3 ligase DTX3L, plays a role in DNA damage repair and in immune responses including interferon-mediated antiviral defenses (PubMed:16809771, PubMed:23230272, PubMed:26479788, PubMed:27796300). Within the complex, enhances DTX3L E3 ligase activity which is further enhanced by PARP9 binding to poly(ADP-ribose) (PubMed:28525742). In association with DTX3L and in presence of E1 and E2 enzymes, mediates NAD(+)-dependent mono-ADP-ribosylation of ubiquitin which prevents ubiquitin conjugation to substrates such as histones (PubMed:28525742). During DNA repair, PARP1 recruits PARP9/BAL1-DTX3L complex to DNA damage sites via PARP9 binding to ribosylated PARP1 (PubMed:23230272). Subsequent PARP1-dependent PARP9/BAL1-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites (PubMed:23230272, PubMed:28525742). In response to DNA damage, PARP9-DTX3L complex is required for efficient non-homologous end joining (NHEJ); the complex function is negatively modulated by PARP9 activity (PubMed:28525742). Dispensable for B-cell receptor (BCR) assembly through V(D)J recombination and class switch recombination (CSR) (By similarity). In macrophages, positively regulates pro-inflammatory cytokines production in response to IFNG stimulation by suppressing PARP14-mediated STAT1 ADP-ribosylation and thus promoting STAT1 phosphorylation (PubMed:27796300). Also suppresses PARP14-mediated STAT6 ADP-ribosylation (PubMed:27796300).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG229020