

Product datasheet for **SC327655**

PARP9 (NM_001146105) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PARP9 (NM_001146105) Human Untagged Clone
Tag:	Tag Free
Symbol:	PARP9
Synonyms:	ARTD9; BAL; BAL1; MGC:7868
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_001146105, the custom clone sequence may differ by one or more nucleotides

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ATGGACTTTTCCATGGTGGCCGGAGCAGCAGCTTACAATGAAAAATCAGAGACTGGTGCT
CTTGGAGAAAACATAGTTGGCAAATCCCATTAAACACAATGACTTCAAAATTTAAAA
AATAATGAGCGTCAGCTGTGTGAAGTCTCCAGAATAAGTTTGGCTGTATCTCTACCCTG
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CCTAGGATAGAGTTATCAGTCTGGAAAGATGACCTCACCACACATGCTGTTGATGCTGTG
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GCTGGTGGATTTGAAATCCAAGAAGAGAGCAAACAGTTTGTGCCAGATATGGTAAAGTG
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GCTGTTGGGCCTCGGTGGATGGAATGGGATAAACAGGGATGACTGGAAAGCTGCAGAGG
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ATTCCAGCCTTGAGCTCTGGGATTTTTCAGTTCCTCTGAATTTGTGTACAAAGACTATT
GTAGAGACTATCCGGTTAGTTTGCAAGGAAGCCAATGATGAGTAATTTGAAAGAAATT
CACCTGGTGAGCAATGAGGACCCTACTGTTGCTGCCTTTAAAGCTGCTTCAGAATTCATC
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AACCTGACCCTCCAGATTGTCCAGGGCCACATTGAATGGCAGACGGCAGATGTAATTGTT
AATTCTGTAAACCCACATGATATTACAGTTGGACCTGTGGCAAAGTCAATTCTACAACAA
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AGAAAGGAACATGACATTTGTCTCAGCTTCAGAAAACCTCAAGTGTCTCCATCACAGAA
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TGCAGAGTTGGCTTTCAAAGAATGTACTCGACACCTTGCATCCAAAATACGGAGCTGGC
ATATACTTCACCAAGAACCTCAAAAACCTGGCAGAGAAGGCCAAGAAAATCTCTGCTGCA
GATAAGCTGATCTATGTGTTTGGAGGCTGAAGTACTCACAGGCTTCTTCTGCCAGGGACAT
CCGTTAAATATTGTTCCCCACCCTGAGTCTGGAGCTATAGATGGTCATGACAGTGTG
GTTGACAATGTCTCCAGCCCTGAAACCTTTGTTATTTTGTAGTGGCATGCAGGCTATACCT
CAGTATTTGTGGACATGCACCCAGGAATATGTACAGTCAACAAGATTACTCATCAGGACCA
ATGAGACCCTTTGCACAGCATCCTTGGAGGGGATTGCAAGTGGCAGCCCTGTTGAT

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Restriction Sites: Please inquire

ACCN: NM_001146105

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<u>NM_001146105.1</u> , <u>NP_001139577.1</u>
RefSeq Size:	3072 bp
RefSeq ORF:	2460 bp
Locus ID:	83666
UniProt ID:	<u>Q8IXQ6</u>
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]

Transcript Variant: This variant (5) differs in the 5' UTR and uses an alternate in-frame splice site in the 5' coding region, compared to variant 1. This results in a shorter protein (isoform b), compared to isoform a. Variants 3, 4 and 5 encode the same isoform (b).