

## Product datasheet for RC210765

### DNA Polymerase beta (POLB) (NM\_002690) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DNA Polymerase beta (POLB) (NM_002690) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DNA Polymerase beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210765 representing NM_002690 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGCAAACGGAAGGCGCCGAGGAGACTCTCAACGGGGGAATCACCGACATGCTCACAGAAGCTCGCAA  
ACTTTGAGAAGAAGCTGAGCCAAGCTATCCACAAGTACAATGCTTACAGAAAAGCAGCATCTGTTATAGC  
AAAATACCCACACAAAATAAAGAGTGGAGCTGAAGCTAAGAAATTGCCTGGAGTAGGAACAAAATTGCT  
GAAAAGATTGATGAGTTTTTAGCAACTGGAAAATTACGTAAACTGGAAAAGATTCCGCAGGATGATACGA  
GTTTCATCCATCAATTTCTGACTCGAGTTAGTGGCATTGGTCCATCTGCTGCAAGGAAGTTGTAGATGA  
AGGAATTAACACTAGAAGATCTCAGAAAAAATGAAGATAAATTGAACCATCATCAGCGAATTGGGCTG  
AAATATTTGGGGACTTTGAAAAAGAATTCCTCGTGAAGAGATGTTACAAATGCAAGATATTGTACTAA  
ATGAAGTTAAAAAGTGGATTCTGAATACATTGCTACAGTCTGTGGCAGTTTCAGAAGAGGTGCAGAGTC  
CAGTGGTGACATGGATGTTCTCTGACCCATCCCAGCTTCACTTCAGAATCAACCAACAGCCAAAAGCTG  
TTACATCAGGTTGTGGAGCAGTTACAAAAGTTTCAATTTATCACAGATACCCTGTCAAAGGGTGAGACAA  
AGTTTCATGGGTGTTTCCAGCTTCCAGTAAAAATGATGAAAAAGAATATCCACACAGAAGAATTGATAT  
CAGGTTGATACCCAAAGATCAGTATTACTGTGGTGTCTCTATTTCACTGGGAGTGATATTTTCAATAAG  
AATATGAGGGCTCATGCCCTAGAAAAGGGTTTCACAATCAATGAGTACACCATCCGTCCTTGGGAGTCA  
CTGGAGTTGCAGGAGAACCCTGCCAGTGGATAGTAAAAAGACATCTTTGATTACATCCAGTGGAAATA  
CCGGGAACCCAAGGACCGGAGCGAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210765 representing NM\_002690  
Red=Cloning site Green=Tags(s)

MSKRKAPQETLNGGITDMLTELANFEKNVSQAIHKYNAYRKAASVIAKYPHKIKSGAEAKKLPGVGKIA  
 EKIDEFLATGKLRKLEKIRODDTSSSINFLTRVSGIGPSAARKFVDEGIKTLEDLRKNEDKLNHHQRIGL  
 KYFGDFEKRIPREEMLQMQDIVLNEVKKVDSEYIATVCGSFRRGAESSGDMVLLTHPSFTSESTKQPKL  
 LHQVVEQLQKVHFITDTLSKGETKFMGVCQLPSKNDEKEYPHRRIDIRLIPKDQYYCGVL YFTGSDIFNK  
 NMRHAHALEKGFITNEYTIRPLGVTGVAGEPLPVDSEKIDFYIQWKYREPKDRSE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg4885\\_h07.zip](https://cdn.origene.com/chromatograms/mg4885_h07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_002690

**ORF Size:** 1005 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\\_002690.3](#)

**RefSeq Size:** 1259 bp

**RefSeq ORF:** 1008 bp

**Locus ID:** 5423

**UniProt ID:** [P06746](#)

**Cytogenetics:** 8p11.21

**Domains:** POLXc, HhH1

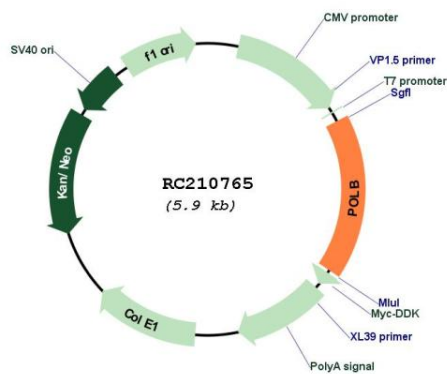
**Protein Families:** Druggable Genome

**Protein Pathways:** Base excision repair

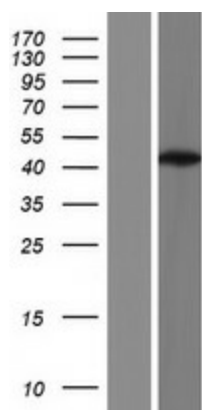
**MW:** 38 kDa

**Gene Summary:** The protein encoded by this gene is a DNA polymerase involved in base excision and repair, also called gap-filling DNA synthesis. The encoded protein, acting as a monomer, is normally found in the cytoplasm, but it translocates to the nucleus upon DNA damage. Several transcript variants of this gene exist, but the full-length nature of only one has been described to date. [provided by RefSeq, Sep 2011]

## Product images:



Circular map for RC210765



Western blot validation of overexpression lysate (Cat# [LY419169]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210765 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).