

## Product datasheet for **RG210765**

### 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:	TurboGFP
Symbol:	DNA Polymerase beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210765 representing NM_002690 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGCAAACGGAAGGCGCCGAGGAGACTCTCAACGGGGGAATCACCGACATGCTCACAGAAGCTCGCAA  
ACTTTGAGAAGAACGTGAGCCAAGCTATCCACAAGTACAATGCTTACAGAAAAGCAGCATCTGTTATAGC  
AAAATACCCACACAAAATAAAGAGTGGAGCTGAAGCTAAGAAATTGCCTGGAGTAGGAACAAAATTGCT  
GAAAAGATTGATGAGTTTTTAGCAACTGGAAAATTACGTAAACTGGAAAAGATTCCGCAGGATGATACGA  
GTTTCATCCATCAATTTCTGACTCGAGTTAGTGGCATTGGTCCATCTGCTGCAAGGAAGTTGTAGATGA  
AGGAATTAACACTAGAAGATCTCAGAAAAAATGAAGATAAATTGAACCATCATCAGCGAATTGGGCTG  
AAATATTTGGGACTTTGAAAAAGAATTCCTCGTGAAGAGATGTTACAAATGCAAGATATTGTACTAA  
ATGAAGTTAAAAAGTGGATTCTGAATACATTGCTACAGTCTGTGGCAGTTTCAGAAGAGGTGCAGAGTC  
CAGTGGTGACATGGATGTTCTCCTGACCCATCCCAGCTTCACTTCAGAATCAACCAACAGCCAAAAGT  
TTACATCAGGTTGTGGAGCAGTTACAAAAGTTTCAATTTATCACAGATACCCTGTCAAAGGGTGAGACAA  
AGTTCATGGGTGTTTCCAGCTTCCAGTAAAAATGATGAAAAAGAATATCCACACAGAAGAATTGATAT  
CAGGTTGATACCCAAAGATCAGTATTACTGTGGTGTCTCTATTTCACTGGGAGTGATATTTTCAATAAG  
AATATGAGGGCTCATGCCCTAGAAAAGGGTTTCACAATCAATGAGTACACCATCCGTCCTTGGGAGTCA  
CTGGAGTTGCAGGAGAACCCTGCCAGTGGATAGTAAAAAGACATCTTTGATTACATCCAGTGGAAATA  
CCGGGAACCCAAGGACCGGAGCGAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG210765 representing NM\_002690  
 Red=Cloning site Green=Tags(s)

```
MSKRKAPQETLNGGITDMLTELANFEKNVSQAIHKYNAYRKAASVIKYPHKIKSGAEAKKLPGVGKTKIA
EKIDEFLATGKLRKLEKIRQDDTSSSINFLTRVSGIGPSAARKFVDEGIKLTLEDLRKNEDKLNHHQRIGL
KYFGDFEKRIPREEMLQMQDIVLNEVKKVDSEYIATVCGSFRRGAESSGDMVLLTHPSFTSESTKQPKL
LHQVVEQLQKVHFITDTLSKGETKFMGVCQLPSKNDEKEYPHRRIDIRLIPKDQYYCGVL YFTGSDIFNK
NMRHAHALEKGFITNEYTIRPLGVTGVAGEPLPVDSEKIDFYIQWKYREPKDRSE
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**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

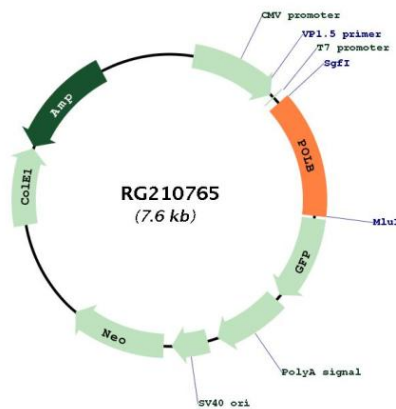
**Domains:** POLXc, HhH1

**Protein Families:** Druggable Genome

**Protein Pathways:** Base excision repair

**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 RG210765