

## DNA Polymerase Beta Protein, Human, Recombinant (His)

### General Information

Synonyms:	DNA Polymerase $\beta$ ;POLB;DNA Polymerase Beta;DNA Polymerase $\beta$
Protein Construction:	Ser2-Glu335
Species:	Human
Expression Host:	E. coli
Accession:	P06746
Molecular Weight:	39 KDa (reducing condition)
AA Sequence:	Ser2-Glu335

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
Formulation:	Supplied as a 0.2 $\mu$ m filtered solution of 20 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 1 mM EDTA, 50% Glycerol, pH 7.8.

### Preparation and Storage

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Human DNA polymerase  $\beta$  is constitutively expressed in cells. It fills in gaps in DNA that are formed following base excision repair. Repair polymerase that plays a key role in base-excision repair. Has 5'-deoxyribose-5-phosphate lyase (dRP lyase) activity that removes the 5' sugar phosphate and also acts as a DNA polymerase that adds one nucleotide to the 3' end of the arising single-nucleotide gap. It conducts 'gap-filling' DNA synthesis in a stepwise distributive fashion rather than in a processive fashion as for other DNA polymerases. The activity cannot be affected by Aphidicolin, which is an inhibitor of DNA polymerase  $\beta$ .

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