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**Product Data Sheet**


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Product Name: POLB Human  
 Cat. No.: GP22111  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	DNA polymerase beta; POLB.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MSKRKAPQET LNGGITDMLT ELANFEKNVS QAIHKYNAYR KAASVIAKYP HIKKSGAEAK KLPGVGKIA EKIDEFLATG KLRKLEKIRQ DDTSSSINFL TRVSGIGPSA ARKFVDEGIK TLEDLRKNED KLNHHQRIGL KYFGDFEKRI PREEMLQMQD IVLNEVKKVD SEYIATVCGS FRRGAESSGD MDVLLTHPSF TSESTKQPKL LHQVVEQLQK VHFITDTLSK GETKFMGVCQ LPSKNDEKEY PHRRIDIRLI PKDQYYCGVL YFTGSDIFNK NMRAHALEKG FTINEYTIRP LGVTGVAGEP LPVDSEKDIF DYIQWKYREP KDRSE.		
Formulation	POLB protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 30% glycerol and 0.1M NaCl.		

**Introduction**

DNA polymerase beta (POLB) is a member of the DNA polymerase type-X family. In eukaryotic cells, POLB performs base excision repair necessary for DNA maintenance, replication, recombination, and drug resistance. POLB has 2 separate domains; the larger is the polymerase domain itself, whereas a small basic N-terminal domain contains an AP lyase activity which excises the abasic sugar-phosphate residue at the strand break. POLB fills single nucleotide gaps in DNA produced by the base excision repair pathway of mammalian cells. POLB overexpression, as seen in some human tumors, could convene an increase in spontaneous mutagenesis.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1%

**Caution: Product has not been fully validated for medical applications. For research use only.**

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HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

POLB Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 355 amino acids (1-335 a.a) and having a molecular mass of 40.3kDa. POLB is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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