

Recombinant Mouse Polh Protein, Myc/DDK-tagged

Cat. No. Polh-4989M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length polymerase (DNA directed), eta (RAD 30 related) (Polh), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) Due to low processivity on both damaged and normal DNA, cooperates with the heterotetrameric (REV3L, REV7, POLD2 and POLD3) POLZ complex for complete bypass of DNA lesions. Inserts one or 2 nucleotide(s) opposite the lesion, the primer is further extended by the tetrameric POLZ complex. In the case of 1,2-intrastrand d(GpG)-cisplatin cross-link, inserts dCTP opposite the 3' guanine. Particularly important for the repair of UV-induced pyrimidine dimers Although inserts the correct base, may cause base transitions and transversions depending upon the context. May play a role in hypermutation at immunoglobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have any lyase activity, preventing the release of the 5'-deoxyribose phosphate (5'-dRP) residue. This covalent trapping of the enzyme by the 5'-dRP residue inhibits its DNA synthetic activity during base excision repair, thereby avoiding high incidence of mutagenesis. Targets POLI to replication foci.
Molecular Mass	76.6 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Polh polymerase (DNA directed), eta (RAD 30 related) [Mus musculus (house mouse)]
Official Symbol	Polh
Synonyms	POLH; polymerase (DNA directed), eta (RAD 30 related); DNA polymerase eta; RAD30 homolog A; DNA-directed DNA polymerase eta; xeroderma pigmentosum variant type protein homolog; XPV; RAD30A
Gene ID	80905
mRNA Refseq	NM_030715
Protein Refseq	NP_109640
UniProt ID	Q9JJN0

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