

Recombinant Full Length Rat POLG Protein, His-Avi-tagged

Cat. No. POLG-4225R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length Rat POLG (DNA Polymerase Gamma, Catalytic Subunit) Protein, His-Avi-tagged, expressed in Baculovirus-Insect Cells (1-1216 aa).
Species	Rat
Source	Baculovirus-Insect Cells
ProteinLength	1-1216 aa
Description	POLG encodes the catalytic subunit of mitochondrial DNA polymerase, responsible for replication and repair of mitochondrial DNA. The enzyme possesses both DNA polymerase and 3'-5' exonuclease proofreading activities. It is essential for mtDNA maintenance. Mutations in POLG are associated with a spectrum of mitochondrial disorders including progressive external ophthalmoplegia (PEO), Alpers syndrome, and mitochondrial neurogastrointestinal encephalopathy (MNGIE).
Form	Liquid
Molecular Mass	138 kDa (calculated)
AASequence	MGSSHHHHHHSSGLNDIFEAQKIEWHEGGGGSVSSSVLDPVPSDGQPQSQMPSS ENGQLRLNPLHIQMLSRGLHEQIFGCGGDVPDEAAVQRSIEHLRKHGLWGQPTTPL PDVQLRLPRLFGGNLDQHFRLLAQKQSLPYLEAAASLSEAQLPPQPRKWWVAEGW TRYGPEGEAEPVAIPEERALVFDVEVCLAEGTCPTLAVAIPSAWYSWCSRRLVEER YSWTSQLSPADLIPLGVSASASSSTQQDWQEQLVVGHNVSFDRAHIREQYLIQGSR

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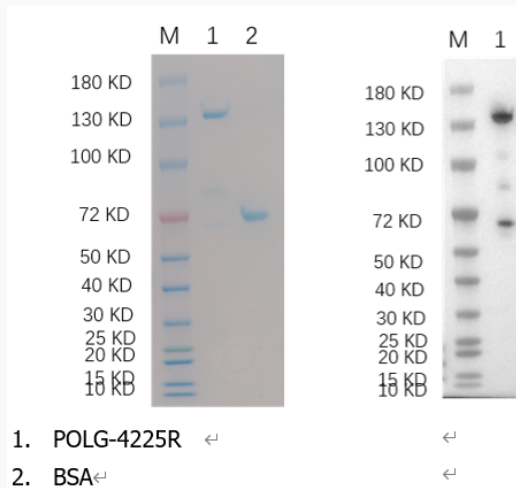
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 GYLPVGRRDNLTELPVSPTEESAAVTCPYRAIESLYRRHCLDQGKQQLETQETDLAE
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 RTPVLGCCISRALPSVVQGEFMTSRVNWWVQSSAVDYLHMLVAMKWLFEFFAID
 GRFCISIHDEVRYLVREEDRYRAALALQITNLLTRCMFAYKLGLNDLPQSVAFFSAVDI
 DQCLRKEVTMDCKTPSNPTGMRKYGIPQGEALDIYQIIELTKGSLEKRSQPGP

Endotoxin	<1 EU/ug by LAL
Purity	>85% by SDS-PAGE
Storage	-20 to -80C. Store it under sterile conditions. Aliquot for optimal storage. Avoid repeated freeze-thaw cycles.
Concentration	0.3 mg/ml by BCA
Storage Buffer	Sterile PBS, pH7.4

GENE INFORMATION

Gene Name	POLG
Official Symbol	Polg
Synonyms	POLG;POLG1;POLGA;SCAE;MDP1;PEO;MTDPS4A;MTDPS4B
Gene ID	85472
mRNA Refseq	NM_053528.2
Protein Refseq	NP_445980.2
MIM	174763
UniProt ID	Q9QYV8

**SDS-PAGE and WB
analysis of POLG-
4225R**



4%-20% reducing SDS-PAGE, CBB stained (left) and WB with Anti-His Mouse Monoclonal Antibody (right)

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