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Product datasheet for AP23095PU-N

DNA Polymerase gamma (POLG) (829-1201) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	**Immunocytochemistry:** 1/100 - 1/200. **Immunofluorescence:** 1/100 - 1/200. **Immunohistochemistry on Paraffin Sections:** 10 µg/ml. **Western Blot:** 1/1000 - 1/10000.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Recombinant protein fragment containing a sequence corresponding to a region within amino acids 829 and 1201 of Human DNA polymerase gamma
Specificity:	This antibody detects DNA polymerase gamma at aa 829-1201.
Formulation:	PBS, pH 7 containing 1% BSA, 20% Glycerol and 0.01% Thimerosal State: Aff - Purified State: Liquid purified Ig fraciton
Concentration:	lot specific
Purification:	Immunoaffinity Chromatography
Conjugation:	Unconjugated
Storage:	Upon receipt, store undiluted (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	polymerase (DNA) gamma, catalytic subunit
Database Link:	Entrez Gene 18975 MouseEntrez Gene 85472 RatEntrez Gene 5428 Human P54098

View online »

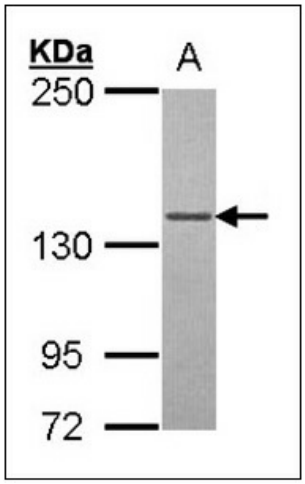
Background: As the only DNA polymerase (pol) present in mitochondria, DNA polymerase gamma (POLG) is necessarily implicated in base excision repair processes to correct oxidative damage to the mitochondrial genome. Therefore, the ability of the catalytic subunit of human POLG has been tested to participate in uracil provoked base excision repair reconstituted in vitro with purified components. Subsequent to actions of uracil DNA glycosylase and apurinic / apyrimidinic endonuclease, human POLG is able to fill a single nucleotide gap in the presence of a 5' terminal deoxyribose phosphate (dRP) flap. The catalytic subunit of human pol gamma catalyzes release of the dRP residue from incised apurinic / apyrimidinic sites to produce a substrate for DNA ligase. Faulty replication of the human mitochondrial genome is thought to be the cause of many diseases. The low selectivity of the mitochondrial DNA polymerase is implicated as the cause of many side effects observed in the treatment of viral infections such as HIV.

Synonyms: POLG, MDP1, POLGA, DNA polymerase subunit gamma-1, PolG-alpha

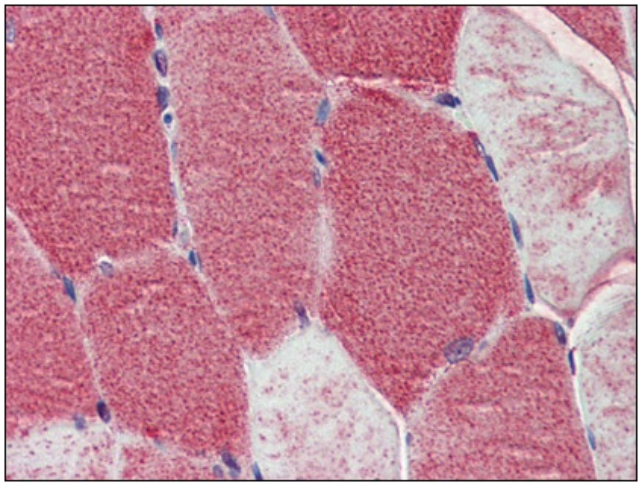
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways

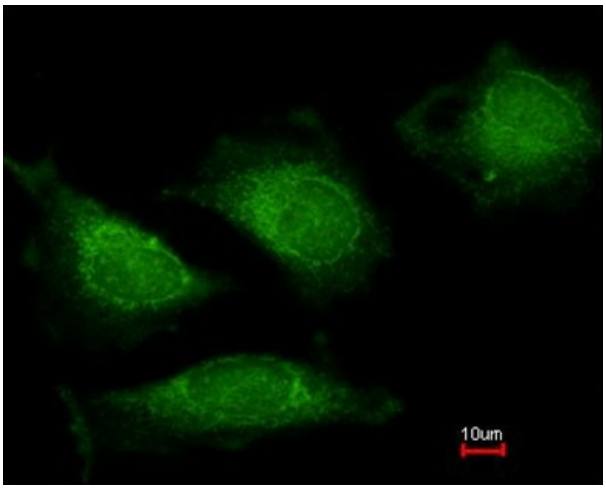
Product images:



Western blot: Sample (30 ug of whole cell lysate). A: 293T. 5% SDS PAGE. POLG antibody diluted at 1:5000.



Human Skeletal Muscle: Formalin-Fixed, Paraffin-Embedded (FFPE)



Immunofluorescence analysis of methanol-fixed HeLa, using DNA polymerase gamma antibody at 1:200 dilution.