

# POLG2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2838c

## Product Information

Application	WB, IHC-P, E
Primary Accession	<a href="#">Q9UHN1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17519
Calculated MW	54911
Antigen Region	205-234

## Additional Information

Gene ID	11232
Other Names	DNA polymerase subunit gamma-2, mitochondrial, DNA polymerase gamma accessory 55 kDa subunit, p55, Mitochondrial DNA polymerase accessory subunit, MtPolB, PolG-beta, POLG2, MTPOLB
Target/Specificity	This POLG2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 205-234 amino acids from the Central region of human POLG2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	POLG2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

Name	POLG2 {ECO:0000303   PubMed:30157269, ECO:0000312   HGNC:HGNC:9180}
Function	Accessory subunit of DNA polymerase gamma solely responsible for replication of mitochondrial DNA (mtDNA). Acts as an allosteric regulator of the holoenzyme activities. Enhances the polymerase activity and the

processivity of POLG by increasing its interactions with the DNA template. Suppresses POLG exonucleolytic proofreading especially toward homopolymeric templates bearing mismatched termini. Binds to single-stranded DNA.

#### Cellular Location

Mitochondrion {ECO:0000250|UniProtKB:P54098}. Mitochondrion matrix, mitochondrion nucleoid {ECO:0000250|UniProtKB:P54098}

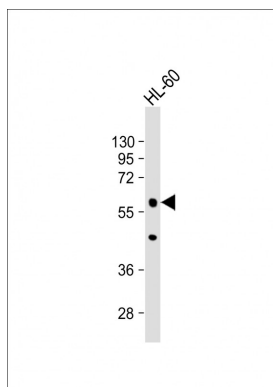
## Background

The accuracy of mitochondrial DNA (mtDNA) replication depends on the coordinated action of many nuclear-encoded proteins and on the correct balance of nucleotides within the mitochondrial matrix. mtDNA is replicated by DNA polymerase gamma, which is composed of a 140-kD catalytic subunit(POLG1) and a 55-kD accessory subunit (POLG2).

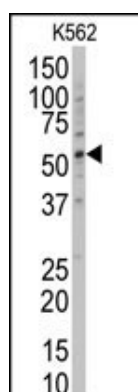
## References

Longley,M.J., Am. J. Hum. Genet. 78 (6), 1026-1034 (2006)  
Carrodeguas,J.A., J. Biol. Chem. 277 (51), 50008-50014 (2002)

## Images

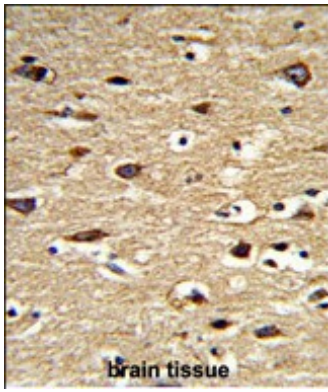


Anti-POLG2 Antibody (Center) at 1:1000 dilution + HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of anti-POLG2 Antibody (Center) (Cat.#AP2838c) in K562 cell line lysates (35ug/lane). POLG2 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human brain tissue reacted with POLG2 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



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