

## ARG59503 anti-DNA polymerase beta antibody

Package: 50 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes DNA polymerase beta
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	DNA polymerase beta
Species	Human
Immunogen	Recombinant fusion protein corresponding to aa. 1-335 of Human DNA polymerase beta (NP_002681.1).
Conjugation	Un-conjugated
Alternate Names	EC 4.2.99.-; EC 2.7.7.7; DNA polymerase beta

### Application Instructions

Predict Reactivity Note	Rat								
Application table	<table> <tr> <th>Application</th><th>Dilution</th></tr> <tr> <td>ICC/IF</td><td>1:50 - 1:200</td></tr> <tr> <td>IHC-P</td><td>1:50 - 1:200</td></tr> <tr> <td>WB</td><td>1:200 - 1:1000</td></tr> </table>	Application	Dilution	ICC/IF	1:50 - 1:200	IHC-P	1:50 - 1:200	WB	1:200 - 1:1000
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IHC-P	1:50 - 1:200								
WB	1:200 - 1:1000								
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.								
Positive Control	Jurkat								
Observed Size	37 kDa								

### Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw

cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

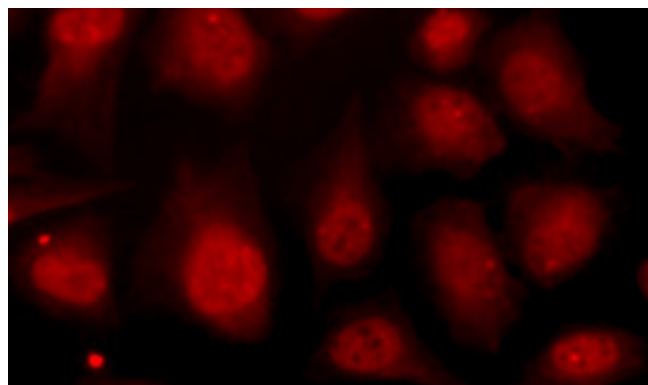
#### Note

For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

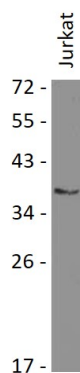
Gene Symbol	POLB
Gene Full Name	polymerase (DNA directed), beta
Background	The protein encoded by this gene is a DNA polymerase involved in base excision and repair, also called gap-filling DNA synthesis. The encoded protein, acting as a monomer, is normally found in the cytoplasm, but it translocates to the nucleus upon DNA damage. Several transcript variants of this gene exist, but the full-length nature of only one has been described to date. [provided by RefSeq, Sep 2011]
Function	Repair polymerase that plays a key role in base-excision repair. Has 5'-deoxyribose-5-phosphate lyase (dRP lyase) activity that removes the 5' sugar phosphate and also acts as a DNA polymerase that adds one nucleotide to the 3' end of the arising single-nucleotide gap. Conducts 'gap-filling' DNA synthesis in a stepwise distributive fashion rather than in a processive fashion as for other DNA polymerases. [UniProt]
Calculated Mw	38 kDa
PTM	Methylation by PRMT6 stimulates the polymerase activity by enhancing DNA binding and processivity.  Ubiquitinated at Lys-41, Lys-61 and Lys-81: monoubiquitinated by HUWE1/ARF-BP1. Monoubiquitinated protein is then the target of STUB1/CHIP, which catalyzes polyubiquitination from monoubiquitin, leading to degradation by the proteasome. USP47 mediates the deubiquitination of monoubiquitinated protein, preventing polyubiquitination by STUB1/CHIP and its subsequent degradation. [UniProt]
Cellular Localization	Nucleus. Cytoplasm. Note=Cytoplasmic in normal conditions. Translocates to the nucleus following DNA damage. [UniProt]

## Images



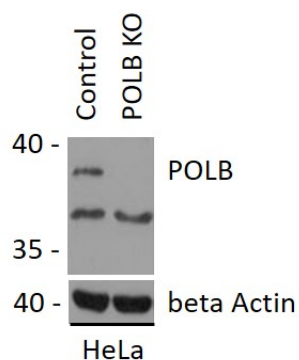
ARG59503 anti-DNA polymerase beta antibody ICC/IF image

Immunofluorescence: U2OS cells stained with ARG59503 anti-DNA polymerase beta antibody.



ARG59503 anti-DNA polymerase beta antibody WB image

Western blot: 25 µg of Jurkat cell lysate stained with ARG59503 anti-DNA polymerase beta antibody at 1:1000 dilution.



ARG59503 anti-DNA polymerase beta antibody WB image

Western blot: 25 µg of extracts from normal (control) and POLB knockout (KO) HeLa cells, using ARG59503 anti-DNA polymerase beta antibody at 1:1000 dilution.