

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><thead><tr><th>Application</th><th>Dilution</th></tr></thead><tbody><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></tbody></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.

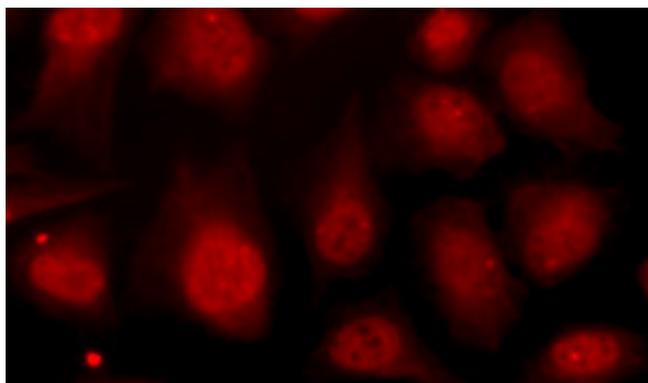
Note

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

Bioinformation

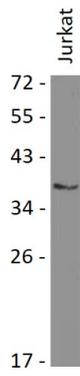
Gene Symbol	POLB
Gene Full Name	polymerase (DNA directed), beta
Background	The protein encoded by this gene is a DNA polymerase involved in base excision and repair, also called gap-filling DNA synthesis. The encoded protein, acting as a monomer, is normally found in the cytoplasm, but it translocates 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



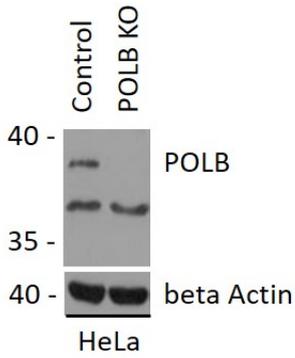
ARG59503 anti-DNA polymerase beta antibody ICC/IF image

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.