ARG59933
anti-POLK / DNA Polymerase Kappa antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes POLK / DNA Polymerase Kappa
Tested Reactivity	Hu
Tested Application	ICC/IF
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	POLK / DNA Polymerase Kappa
Species	Human
Immunogen	Recombinant fusion protein corresponding to aa. 1-260 of Human POLK (NP_057302.1).
Conjugation	Un-conjugated
Alternate Names	POLQ; DINB protein; DINP; DNA polymerase kappa; DINB1; EC 2.7.7.7

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:200

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Observed Size: 80 kDa, 110 kDa

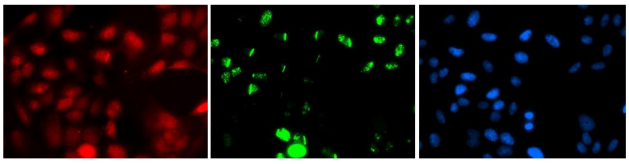
Properties

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

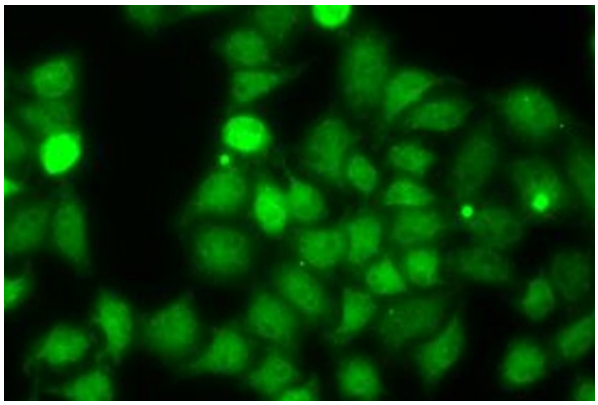
Gene Symbol	POLK
Gene Full Name	polymerase (DNA directed) kappa
Background	External and internal DNA-damaging agents continually threaten the integrity of genetic material in cells. Although a variety of repair mechanisms exist to remove the resulting lesions, some lesions escape repair and block the replication machinery. Members of the Y family of DNA polymerases, such as POLK, permit the continuity of the replication fork by allowing replication through such DNA lesions. Each Y family polymerase has a unique DNA-damage bypass and fidelity profile. POLK is specialized for the extension step of lesion bypass (summary by Lone et al., 2007 [PubMed 17317631]).[supplied by OMIM, Jan 2010]
Function	DNA polymerase specifically involved in DNA repair. Plays an important role in translesion synthesis, where the normal high-fidelity DNA polymerases cannot proceed and DNA synthesis stalls. Depending on the context, it inserts the correct base, but causes frequent base transitions, transversions and frameshifts. Lacks 3'-5' proofreading exonuclease activity. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have lyase activity. [UniProt]
Calculated Mw	99 kDa
Cellular Localization	Nucleus. Note=Detected throughout the nucleus and at replication foci (PubMed:12414988). Recruited to DNA damage sites in response to ultraviolet irradiation: N6-methyladenosine (m6A)-containing mRNAs accumulate in the vicinity of DNA damage sites and their presence is required to recruit POLK (PubMed:28297716). [UniProt]

Images



ARG59933 anti-POLK / DNA Polymerase Kappa antibody ICC/IF image

Immunofluorescence: GFP-RNF168 transgenic U2OS cells stained with ARG59933 anti-POLK / DNA Polymerase Kappa antibody (Red). Green: GFP-RNF168 fusion protein expression for DNA damage marker. Blue: DAPI for nuclear staining. GFP-RNF168 can be used to mark cells damaged by UV-A laser for they always gather around DNA damage region.



ARG59933 anti-POLK / DNA Polymerase Kappa antibody ICC/IF image

Immunofluorescence: U2OS cells stained with ARG59933 anti-POLK / DNA Polymerase Kappa antibody.