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POLK Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19981c

Specification

POLK Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	Q9UBT6
Other Accession	NP_057302.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**98809**
Antigen Region	**531-560**

POLK Antibody (Center) - Additional Information

Gene ID 51426

Other Names
DNA polymerase kappa, DINB protein, DINP, POLK, DINB1

Target/Specificity
This POLK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 531-560 amino acids from the Central region of human POLK.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
POLK Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

POLK Antibody (Center) - Protein Information

Name POLK

Synonyms DINB1

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.

Cellular Location
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)

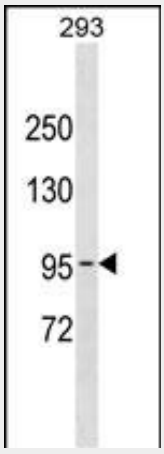
Tissue Location
Detected at low levels in testis, spleen, prostate and ovary. Detected at very low levels in kidney, colon, brain, heart, liver, lung, placenta, pancreas and peripheral blood leukocytes

POLK Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

POLK Antibody (Center) - Images



POLK Antibody (Center) (Cat. #AP19981c) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the POLK antibody detected the POLK protein (arrow).

POLK Antibody (Center) - 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]).

POLK Antibody (Center) - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Monsees, G.M., et al. Breast Cancer Res. Treat. (2010) In press :
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