Datasheet for ABIN968287

anti-POLD1 antibody (AA 60-261)

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Overview

Quantity:	50 µg
Target:	POLD1
Binding Specificity:	AA 60-261
Reactivity:	Human, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This POLD1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Human DNA Polymerase delta aa. 60-261
Clone:	22-D Polymerase delta
Isotype:	IgG1
Cross-Reactivity:	Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	POLD1
Alternative Name:	DNA Polymerase delta (POLD1 Products)
Background:	Errors in DNA sequence result from environmental factors or are committed by DNA polymerases during replication. If unchecked, these errors might accumulate genetic damage such that the cell could no longer function. Thus, DNA repair processes involve mechanisms for the excision of damaged sequences and the resynthesis and ligation of the proper sequence. In mammalian cells, this proofreading function rests with DNA polymerase (pol) delta, a heterodimer of a 50kDa subunit, which stimulates pol delta activity in the presence of PCNA (proliferating cell nuclear antigen) and a 125kDa catalytic subunit. The catalytic subunit has 3' to 5' exonuclease activity which distinguishes pol delta from pol alpha and pol beta. Pol delta is also central to DNA replication where it functions in leading strand synthesis at the replication fork. The catalytic subunit is phosphorylated by G1 cyclin-dependent kinase-cyclin complexes and, via its N-terminal 249 amino acids, interacts with cdk2. However, phosphorylation has little or no effect on the activity of pol delta. Thus, DNA polymerase ä is essential for DNA replication and is unique in its ability to replace damaged sequences through the process of DNA excision repair.
Molecular Weight:	125 kDa
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Chromatin Binding, Synthesis of DNA

Application Details

Comment:	Related Products: ABIN967389, ABIN968537
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide

Handling

Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

Saitoh, Pizzi, Wang: "Perturbation of SUMOlation enzyme Ubc9 by distinct domain within nucleoporin RanBP2/Nup358." in: **The Journal of biological chemistry**, Vol. 277, Issue 7, pp. 4755-63, (2002) (PubMed).

Wu, Zhang, Zeng, Zhang, Mo, Li, Lee: "Characterization of the p125 subunit of human DNA polymerase delta and its deletion mutants. Interaction with cyclin-dependent kinase-cyclins." in: **The Journal of biological chemistry**, Vol. 273, Issue 16, pp. 9561-9, (1998) (PubMed).

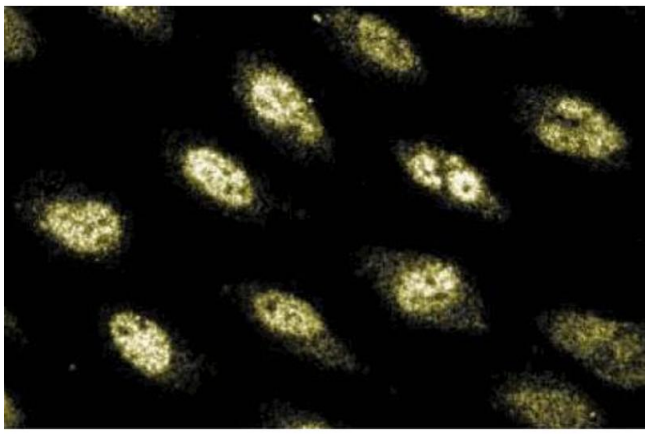
Sun, Jiang, Zhang, Zhang, Zhou, Li, Toomey, Lee: "Expression and characterization of the small subunit of human DNA polymerase delta." in: **The Journal of biological chemistry**, Vol. 272, Issue 20, pp. 13013-8, (1997) (PubMed).

Zeng, Jiang, Zhang, Hao, Lee: "DNA polymerase delta is involved in the cellular response to UV damage in human cells." in: **The Journal of biological chemistry**, Vol. 269, Issue 19, pp. 13748-51, (1994) (PubMed).

Yang, Chang, Zhang, Hao, Zhu, Toomey, Lee: "Molecular cloning of the cDNA for the catalytic subunit of human DNA polymerase delta." in: **Nucleic acids research**, Vol. 20, Issue 4, pp. 735-45, (1992) (PubMed).

Western Blotting

Image 1. Western blot analysis of DNA Polymerase delta on Jurkat lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of Polymerase delta.



Immunofluorescence

Image 2. Immunofluorescence staining of Human Endothelial cells.

Image 3.