Datasheet for ABIN7150228

anti-POLD1 antibody (Catalytic Subunit) (Biotin)

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Overview

Quantity:	100 µg
Target:	POLD1
Binding Specificity:	AA 1-123, Catalytic Subunit
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This POLD1 antibody is conjugated to Biotin
Application:	ELISA

Product Details

Immunogen:	Recombinant Human DNA polymerase delta catalytic subunit protein (1-123AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	>95%, Protein G purified

Target Details

Target:	POLD1
Alternative Name:	POLD1 (POLD1 Products)
Background:	Background: As the catalytic component of the trimeric (Pol-delta3 complex) and tetrameric DNA polymerase delta complexes (Pol-delta4 complex), plays a crucial role in high fidelity

Target Details

	genome replication, including in lagging strand synthesis, and repair. Exhibits both DNA polymerase and 3\'- to 5\'-exonuclease activities (PubMed:16510448, PubMed:19074196, PubMed:20334433, PubMed:24035200, PubMed:24022480). Requires the presence of accessory proteins POLD2, POLD3 and POLD4 for full activity. Depending upon the absence (Pol-delta3) or the presence of POLD4 (Pol-delta4), displays differences in catalytic activity. Most notably, expresses higher proofreading activity in the context of Pol-delta3 compared with that of Pol-delta4 (PubMed:19074196, PubMed:20334433). Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may be better suited to fulfill this task, exhibiting near-absence of strand displacement activity compared to Pol-delta4 and stalling on encounter with the 5\'-blocking oligonucleotides. Pol-delta3 idling process may avoid the formation of a gap, while maintaining a nick that can be readily ligated (PubMed:24035200). Along with DNA polymerase kappa, DNA polymerase delta carries out approximately half of nucleotide excision repair (NER) synthesis following UV irradiation (PubMed:20227374). Under conditions of DNA replication stress, in the presence of POLD3 and POLD4, may catalyze the repair of broken replication forks through break-induced replication (BIR) (PubMed:24310611). Involved in the translesion synthesis (TLS) of templates carrying O6-methylguanine or abasic sites (PubMed:19074196). Aliases: Polymerase (DNA directed) delta 1 catalytic subunit antibody, CDC2 antibody, CDC2 homolog antibody, CRCS10 antibody, DNA directed DNA polymerase delta 1 antibody, DNA directed polymerase delta 1 antibody, DNA pol delta 1 antibody, DNA polymerase delta catalytic subunit antibody, DNA polymerase subunit delta p125 antibody, DPOD1_HUMAN antibody, MDPL antibody, POLD antibody, POLD 1 antibody, POLD1 antibody, Polymerase (DNA directed) delta 1 catalytic subunit 125 kDa antibody, Polymerase (DNA) delta 1 catalytic subunit antibody, Polymerase DNA directed delta 1 catalytic subunit 125kD antibody, polymerase, DNA, delta antibody
UniProt:	P28340
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Chromatin Binding, Synthesis of DNA

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Preservative: 0.03 % Proclin 300 Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.