Datasheet for ABIN7150236

anti-POLD3 antibody (AA 203-275) (Biotin)

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Overview

Quantity:	100 µg
Target:	POLD3
Binding Specificity:	AA 203-275
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This POLD3 antibody is conjugated to Biotin
Application:	ELISA

Product Details

Immunogen:	Recombinant Human DNA polymerase delta subunit 3 protein (203-275AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	>95%, Protein G purified

Target Details

Target:	POLD3
Alternative Name:	POLD3 (POLD3 Products)
Background:	Background: As a component of the trimeric and tetrameric DNA polymerase delta complexes (Pol-delta3 and Pol-delta4, respectively), plays a role in high fidelity genome replication,

Target Details

including in lagging strand synthesis, and repair. Required for optimal Pol-delta activity. Stabilizes the Pol-delta complex and plays a major role in Pol-delta stimulation by PCNA (PubMed:10219083, PubMed:10852724, PubMed:11595739, PubMed:16510448, PubMed:24035200). Pol-delta3 and Pol-delta4 are characterized by the absence or the presence of POLD4. They exhibit differences in catalytic activity. Most notably, Pol-delta3 shows higher proofreading activity than Pol-delta4 (PubMed:19074196, PubMed:20334433). Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may also 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. In this context, POLD3, along with PCNA and RFC1-replication factor C complex, is required to recruit POLD1, the catalytic subunit of the polymerase delta complex, to DNA damage sites (PubMed:20227374). Under conditions of DNA replication stress, required for 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 performed by Pol-delta4, independently of DNA polymerase zeta (REV3L) or eta (POLH). Facilitates abasic site bypass by DNA polymerase delta by promoting extension from the nucleotide inserted opposite the lesion (PubMed:19074196, PubMed:25628356, PubMed:27185888). Also involved in TLS, as a component of the POLZ complex. Along with POLD2, dramatically increases the efficiency and processivity of DNA synthesis of the minimal DNA polymerase zeta complex, consisting of only REV3L and REV7 (PubMed:24449906). Aliases: DNA polymerase delta subunit 3 antibody, DNA polymerase delta subunit p66 antibody, DNA polymerase delta, subunit 3 antibody, DNA polymerase subunit delta p66 antibody, DPOD3_HUMAN antibody, KIAA0039 antibody, P66 antibody, P68 antibody, Pol delta C subunit (p66) antibody, Pold3 antibody, Polymerase (DNA directed), delta 3 antibody, Polymerase (DNA-directed), delta 3, accessory subunit antibody, PPP1R128 antibody, Protein phosphatase 1, regulatory subunit 128 antibody

UniProt:	Q15054
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Synthesis of DNA

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.

Application Details

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.