


Anti-DNA polymerase alpha/POLA antibody ab31777

★★★★★ [2 Abreviews](#) [10 References](#) [1 Image](#)

Overview

Product name	Anti-DNA polymerase alpha/POLA antibody
Description	Rabbit polyclonal to DNA polymerase alpha/POLA
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Chicken, Human, Xenopus laevis Predicted to work with: Mouse, Rat, Dog 
Immunogen	Synthetic peptide corresponding to Human DNA polymerase alpha/POLA aa 1100-1200. (Peptide available as ab30406)
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituent: PBS</p> <p>Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.</p>
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab31777 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (2)	Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 180 kDa (predicted molecular weight: 166 kDa).
IHC-P		Use at an assay dependent concentration.

Target

Function

Plays an essential role in the initiation of DNA replication. During the S phase of the cell cycle, the DNA polymerase alpha complex (composed of a catalytic subunit POLA1/p180, a regulatory subunit POLA2/p70 and two primase subunits PRIM1/p49 and PRIM2/p58) is recruited to DNA at the replicative forks via direct interactions with MCM10 and WDHD1. The primase subunit of the polymerase alpha complex initiates DNA synthesis by oligomerising short RNA primers on both leading and lagging strands. These primers are initially extended by the polymerase alpha catalytic subunit and subsequently transferred to polymerase delta and polymerase epsilon for processive synthesis on the lagging and leading strand, respectively. The reason this transfer occurs is because the polymerase alpha has limited processivity and lacks intrinsic 3' exonuclease activity for proofreading error, and therefore is not well suited for replicating long complexes.

Sequence similarities

Belongs to the DNA polymerase type-B family.

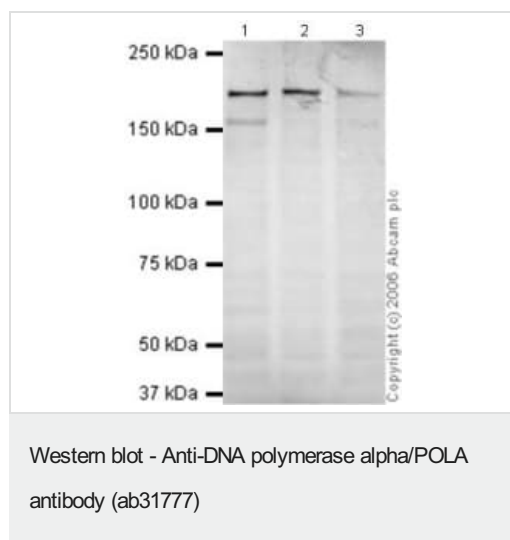
Post-translational modifications

A 165 kDa form is probably produced by proteolytic cleavage at Lys-124.

Cellular localization

Nucleus.

Images



All lanes : Anti-DNA polymerase alpha/POLA antibody (ab31777) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : Jurkat whole cell lysate ([ab7899](#))

Lane 3 : A-431 whole cell lysate ([ab7909](#))

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat polyclonal to Rabbit IgG (Alexa Fluor® 680) at

1/10000 dilution

Performed under reducing conditions.

Predicted band size: 166 kDa

Observed band size: 180 kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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