


## Product datasheet

# Anti-DNA polymerase alpha/POLA antibody ab225562

1 References 2 Images

### Overview

<b>Product name</b>	Anti-DNA polymerase alpha/POLA antibody
<b>Description</b>	Rabbit polyclonal to DNA polymerase alpha/POLA
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IP, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rabbit, Horse, Dog, Pig, Chimpanzee, Cynomolgus monkey, Rhesus monkey, Gorilla, Orangutan 
<b>Immunogen</b>	Synthetic peptide within Human DNA polymerase alpha/POLA aa 775-825. The exact sequence is proprietary. (NP_058633.2). Database link: <a href="#">P09884</a>
<b>Positive control</b>	WB: HeLa, HEK-293T and NIH/3T3 whole cell lysates. IP: HeLa whole cell lysate.
<b>General notes</b>	This product was previously labelled as DNA polymerase alpha

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	ab225562 was affinity purified using an epitope specific to DNA polymerase alpha/POLA immobilized on solid support.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab225562** in the following tested applications.

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

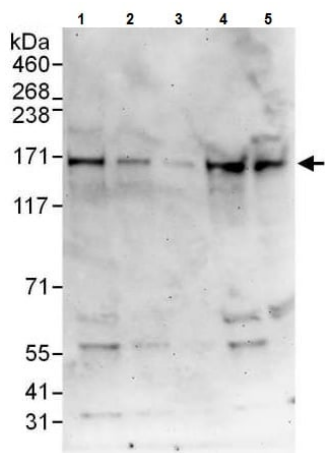
Application	Abreviews	Notes
IP		Use at an assay dependent dilution.
WB		1/2000 - 1/10000. Predicted molecular weight: 166 kDa.

## Target

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<b>Function</b>	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.
<b>Sequence similarities</b>	Belongs to the DNA polymerase type-B family.
<b>Post-translational modifications</b>	A 165 kDa form is probably produced by proteolytic cleavage at Lys-124.
<b>Cellular localization</b>	Nucleus.

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Western blot - Anti-DNA polymerase alpha/POLA antibody (ab225562)

**All lanes :** Anti-DNA polymerase alpha/POLA antibody (ab225562) at 0.04 µg/ml

**Lane 1 :** HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 50 µg

**Lane 2 :** HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 15 µg

**Lane 3 :** HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 5 µg

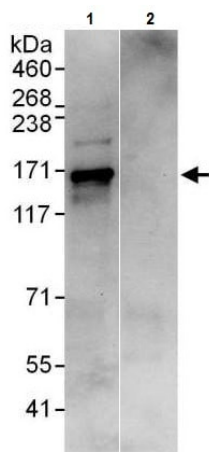
**Lane 4 :** HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 50 µg

**Lane 5 :** NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate at 50 µg

Developed using the ECL technique.

**Predicted band size:** 166 kDa

**Exposure time:** 3 minutes



Immunoprecipitation - Anti-DNA polymerase alpha/POLA antibody (ab225562)

DNA polymerase alpha/POLA was immunoprecipitated from HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate (1 mg for IP, 20% of IP loaded) with ab225562 at 3 µg/mg lysate. Western blot was performed from the immunoprecipitate using ab225562 at 0.4 µg/ml.

Lane 1: ab225562 IP in HeLa whole cell lysate.

Lane 2: Control IgG IP in HeLa whole cell lysate.

Detection: Chemiluminescence with exposure time of 30 seconds.

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

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