


Anti-DNA polymerase alpha/POLA antibody ab176734

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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, IP
Species reactivity	Reacts with: Human Predicted to work with: Rabbit, Horse, Chicken, Guinea pig, Dog, Non human primates 
Immunogen	Synthetic peptide within Human DNA polymerase alpha/POLA aa 1175-1225. The exact sequence is proprietary. NP_058633.2. Database link: P09884
Positive control	HeLa and 293T cell lysates
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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, 99% Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab176734 is affinity purified using an epitope specific to DNA polymerase alpha/POLA immobilized on solid support.
Clonality	Polyclonal

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab176734 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		1/2000 - 1/10000. Predicted molecular weight: 166 kDa.
IP		Use at 2-5 µg/mg of lysate.

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.

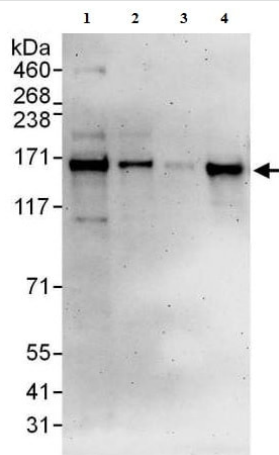
Post-translational modifications

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

Cellular localization

Nucleus.

Images



Western blot - Anti-DNA polymerase alpha/POLA antibody (ab176734)

All lanes : Anti-DNA polymerase alpha/POLA antibody (ab176734) at 0.04 µg/ml

Lane 1 : HeLa whole cell lysate at 50 µg

Lane 2 : HeLa whole cell lysate at 15 µg

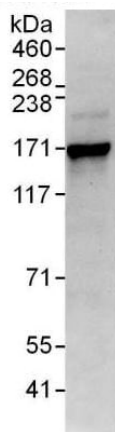
Lane 3 : HeLa whole cell lysate at 5 µg

Lane 4 : 293T 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 (ab176734)

ab176734 at 0.4 µg/ml detecting DNA polymerase alpha/POLA in HeLa whole cell lysate by WB following IP. ab176734 was used for IP at 3 µg/mg of lysate, 1 mg of lysate was used for IP and 20% of the IP was loaded.

Detection: Chemiluminescence with an exposure time of 10 seconds.

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

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