abcam

Product datasheet

Anti-DNA Polymerase iota antibody ab185686

1 Image

Overview

Product name	Anti-DNA Polymerase iota antibody
Description	Rabbit polyclonal to DNA Polymerase iota
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant fragment corresponding to Human DNA Polymerase iota aa 50-350. Database link: **Q9UNA4**
General notes	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. 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

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: 7.30 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol, 49% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab185686 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		1/500 - 1/2000. Predicted molecular weight: 83 kDa.

Target

Function

Error-prone DNA polymerase specifically involved in DNA repair. Plays an important role in translesion synthesis, where the normal high-fidelity DNA polymerases cannot proceed and DNA synthesis stalls. Favors Hoogsteen base-pairing in the active site. Inserts the correct base with high-fidelity opposite an adenosine template. Exhibits low fidelity and efficiency opposite a thymidine template, where it will preferentially insert guanosine. May play a role in hypermutation of immunogobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but may not have lyase activity.

Tissue specificity

Ubiquitous. Highly expressed in testis.

Sequence similarities

Belongs to the DNA polymerase type-Y family.
Contains 1 umuC domain.

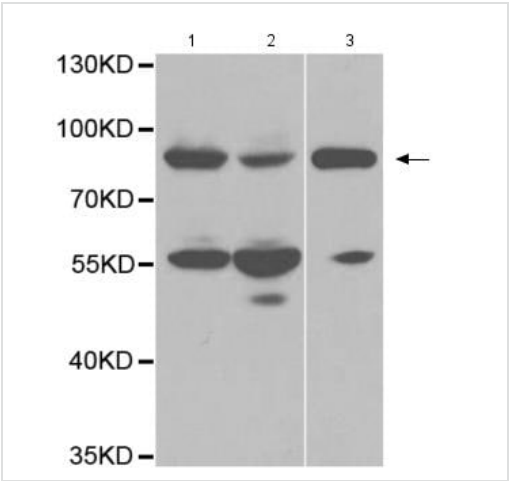
Domain

The catalytic core consists of fingers, palm and thumb subdomains, but the fingers and thumb subdomains are much smaller than in high-fidelity polymerases; residues from five sequence motifs of the Y-family cluster around an active site cleft that can accommodate DNA and nucleotide substrates with relaxed geometric constraints, with consequently higher rates of misincorporation and low processivity.

Cellular localization

Nucleus. Accumulates at replication forks after DNA damage.

Images



Western blot - Anti-DNA Polymerase iota antibody (ab185686)

All lanes : Anti-DNA Polymerase iota antibody (ab185686) at 1/500 dilution

Lane 1 : BT474 cell lysate
Lane 2 : MCF7 cell lysate
Lane 3 : mouse testis lysate

Predicted band size: 83 kDa

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