abcam

Product datasheet

Anti-DNA polymerase eta antibody ab234855

3 Images

Overview

Product name	Anti-DNA polymerase eta antibody
Description	Rabbit polyclonal to DNA polymerase eta
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment corresponding to Human DNA polymerase eta aa 400-650. Database link: **Q9Y253** Run BLAST with Run BLAST with
Positive control	WB: A549 and K562 cell lysate. IHC-P: Human tonsil tissue. ICC/IF: HepG2 cells.
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: 7.40 Preservative: 0.03% Proclin 300 Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Purity	Protein G purified
Purification notes	Purity >95%
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab234855 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 - 1/5000. Predicted molecular weight: 78 kDa.
ICC/IF		1/50 - 1/200.
IHC-P		1/20 - 1/200.

Target

Function 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. Plays an important role in the repair of UV-induced pyrimidine dimers. Depending on the context, it inserts the correct base, but causes frequent base transitions and transversions. May play a role in hypermutation at immunoglobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have lyase activity. Targets POLI to replication foci.

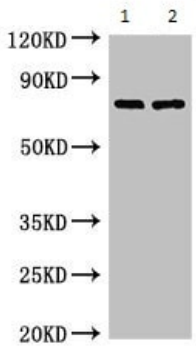
Involvement in disease Defects in POLH are the cause of xeroderma pigmentosum variant type (XPV) [MIM:278750]; also designated as XP-V. Xeroderma pigmentosum (XP) is an autosomal recessive disease due to deficient nucleotide excision repair. It is characterized by hypersensitivity of the skin to sunlight, followed by high incidence of skin cancer and frequent neurologic abnormalities. XPV shows normal nucleotide excision repair, but an exaggerated delay in recovery of replicative DNA synthesis. Most XPV patients do not develop clinical symptoms and skin neoplasias until a later age. Clinical manifestations are limited to photo-induced deterioration of the skin and eyes.

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



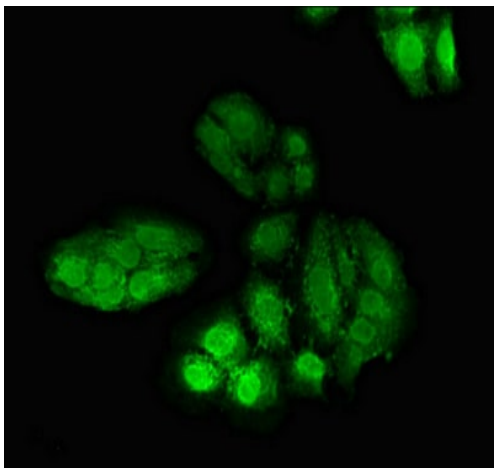
Western blot - Anti-DNA polymerase eta antibody (ab234855)

All lanes : Anti-DNA polymerase eta antibody (ab234855) at 1/500 dilution

Lane 1 : A549 (Human lung carcinoma cell line) cell lysate
Lane 2 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) cell lysate

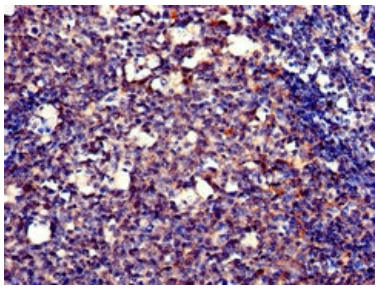
Secondary
All lanes : Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 78 kDa



Immunocytochemistry/ Immunofluorescence - Anti-DNA polymerase eta antibody (ab234855)

HepG2 (human liver hepatocellular carcinoma cell line) cells labeling DNA polymerase eta using ab234855 at 1/100 dilution in ICC/IF. Secondary antibody was an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (H+L).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DNA polymerase eta antibody (ab234855)

Paraffin-embedded human tonsil tissue stained for DNA polymerase eta using ab234855 at 1/100 dilution in immunohistochemical analysis.

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