abcam

ab181841

Anti-POLDIP2 antibody [EPR13832]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR13832
Purification technique	Affinity purification Protein A
Concentration	1.89 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/350
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information POLDIP2

Function	Involved in DNA damage tolerance by regulating translesion synthesis (TLS) of templates carrying DNA damage lesions such as 8oxoG and abasic sites (PubMed:24191025). May act by stimulating activity of DNA polymerases involved in TLS, such as PRIMPOL and polymerase delta (POLD1) (PubMed:24191025, PubMed:26984527).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	POLDIP2 also known as Polymerase Delta-Interacting Protein 2 has a molecular mass of approximately 43 kDa. This protein primarily interacts with DNA polymerase delta and plays a role as an essential cofactor involved in DNA replication and repair processes. It is expressed in various tissues with higher

	levels in the heart and skeletal muscle indicating its importance in these tissues. Through its interaction POLDIP2 regulates the activity and stability of DNA polymerase delta during the cell cycle.
Biological function summary	POLDIP2 is involved in maintaining genomic stability and regulating cellular proliferation. It acts as part of the DNA replication machinery where it assists in the formation and function of the replication fork. POLDIP2 contributes to various cellular functions by interacting with protein complexes which are important for DNA repair mechanisms highlighting its role in preserving genetic information integrity across cell generations.
Pathways	POLDIP2 plays a significant part in the DNA damage response (DDR) pathway. It works with proteins involved in base excision repair and homologous recombination including PCNA and RAD51. The effective cooperation with these proteins ensures that cells proficiently repair DNA errors and maintain cell cycle progression without abnormalities. POLDIP2's role in these pathways highlights its importance in cell survival and proliferation.
Associated diseases and disorders	POLDIP2 has been connected to cancer and cardiovascular diseases due to its functions in DNA repair and cellular proliferation. Disruption in POLDIP2 expression or function can lead to genomic instability increasing the risk of tumor development. Moreover POLDIP2's involvement in oxidative stress regulation links it to cardiovascular pathologies often associated with endothelial dysfunction. Aberrant interactions with proteins such as Nox4 in endothelial cells can exacerbate these conditions indicating POLDIP2’s potential as a therapeutic target.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

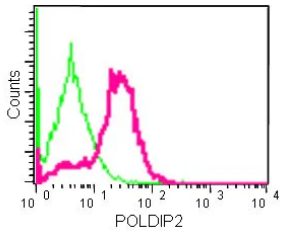
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

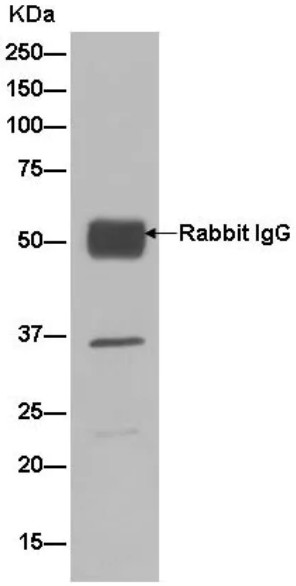
4 product images



Flow Cytometry (Intracellular) - Anti-POLDIP2 antibody [EPR13832] (ab181841)

POLDIP2 Flow Cytometry (Intracellular) staining using rabbit Anti-POLDIP2 antibody

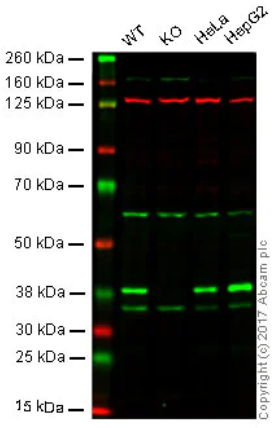
Intracellular flow cytometric analysis of2% paraformaldehyde-fixed HeLa cells labeling POLDIP2 with ab181841 at 1/350 diltuion (red) compared to aRabbit monoclonal IgG Isotype control (green), followed byGoat anti rabbit IgG (FITC) secondary antibody at 1/150 dilution.



Immunoprecipitation - Anti-POLDIP2 antibody [EPR13832] (ab181841)

Western blot analysis of HeLa cell lysate immunoprecipitated with ab181841 at 1/40 dilution. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate secondary antibody used at 1/1000 dilution.
All lanes:
Immunoprecipitation - Anti-POLDIP2 antibody [EPR13832] (ab181841)

Predicted band size: 42 kDa



Western blot - Anti-POLDIP2 antibody [EPR13832] (ab181841)

POLDIP2 Western blot staining using rabbit Anti-POLDIP2 antibody

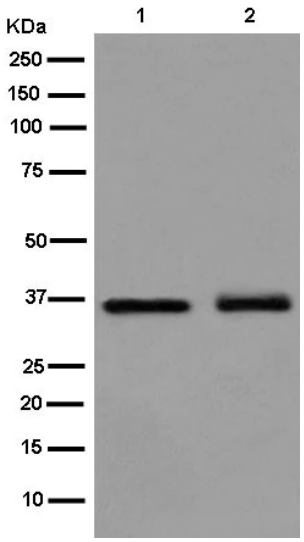
Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: POLDIP2 knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: HepG2 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab181841 observed at 38 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab181841 was shown to specifically recognize POLDIP2 in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when POLDIP2 knockout samples were examined. Wild-type and POLDIP2 knockout samples were subjected to SDS-PAGE. ab181841 and ab18058 (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/1,000 dilution and 1/20,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1/20,000 dilution for 1 hour at room temperature before imaging.

All lanes:

Western blot - Anti-POLDIP2 antibody [EPR13832] (ab181841)

Predicted band size: 42 kDa



Western blot - Anti-POLDIP2 antibody [EPR13832] (ab181841)

All lanes:
Western blot - Anti-POLDIP2 antibody [EPR13832] (ab181841) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 20 µg

Lane 2:
HepG2 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 37 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.