abcam

ab232609

Anti-POLDIP2 antibody [EPR13832] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR13832
Purification technique	Affinity purification Protein A
Concentration	0.987 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab232609 is the carrier-free version of ab181841.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody

preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

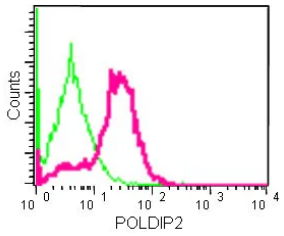
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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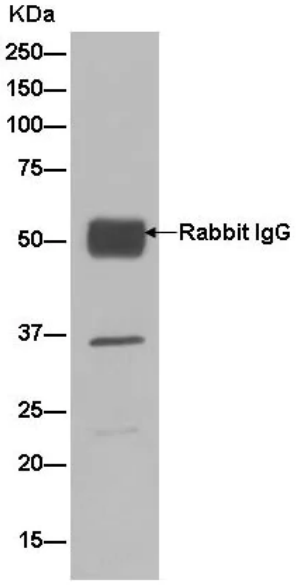
3 product images



Flow Cytometry (Intracellular) - Anti-POLDIP2 antibody [EPR13832] - BSA and Azide free (ab232609)

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

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed HeLa cells labeling POLDIP2 with ab181841 at 1/350 diltuion (red) compared to a Rabbit monoclonal IgG Isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary antibody at 1/150 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181841).

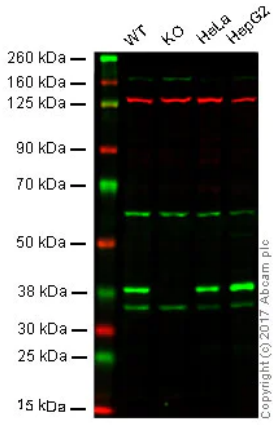


Immunoprecipitation - Anti-POLDIP2 antibody [EPR13832] - BSA and Azide free (ab232609)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181841).

All lanes:
Immunoprecipitation - Anti-POLDIP2 antibody [EPR13832] (ab181841)

Predicted band size: 42 kDa



Western blot - Anti-POLDIP2 antibody [EPR13832] - BSA and Azide free (ab232609)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181841).

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

Predicted band size: 42 kDa

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