abcam

ab247957

Anti-DP1 antibody [EPR4959(2)] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

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	EPR4959(2)
Purification technique	Affinity purification Protein A
Concentration	1.043 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TFDP1

Function	Can stimulate E2F-dependent transcription. Binds DNA cooperatively with E2F family members through the E2 recognition site, 5'-TTTC[CG]CGC-3', found in the promoter region of a number of genes whose products are involved in cell cycle regulation or in DNA replication (PubMed:7739537, PubMed:8405995). The E2F1:DP complex appears to mediate both cell proliferation and apoptosis. Blocks adipocyte differentiation by repressing CEBPA binding to its target gene promoters (PubMed:20176812).

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

ab247957 is the carrier-free version of ab124678.

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	The DP1 receptor also known as the prostaglandin D2 receptor 1 is a G-protein-coupled receptor with a molecular mass of approximately 44 kDa. This receptor binds to prostaglandin D2 (PGD2) and is found in various tissues including the central nervous system lungs and some immune cells. The presence of DP1 in these tissues suggests a role in multiple physiological processes reflecting its distribution in the body.
Biological function summary	Prostaglandin D2 (PGD2) plays a significant role in mediating inflammatory and allergic responses. The DP1 receptor is part of a signaling complex that modulates smooth muscle relaxation inhibition of platelet aggregation and sleep induction.

	Its expression in both neural and peripheral tissues underlines its involvement in a range of biological functions including the regulation of sleep-wake cycles and inflammation.
Pathways	The DP1 receptor contributes significantly to the prostaglandin signaling pathway which involves other prostaglandin receptors such as DP2 and EP receptors. This pathway mediates various physiological responses including vasodilation and immune modulation. The signaling interactions between DP1 and these related receptors help coordinate complex biological processes such as the regulation of vascular tone and inflammatory responses.
Associated diseases and disorders	Abnormal DP1 signaling relates to asthma and allergic rhinitis conditions where inflammation and immune response are dysregulated. Overactivation or altered regulation of DP1 can exacerbate these diseases often involving other proteins like COX-2 which elevate levels of PGD2 during inflammation. Understanding DP1's role offers potential therapeutic angles for managing allergic and inflammatory diseases.

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

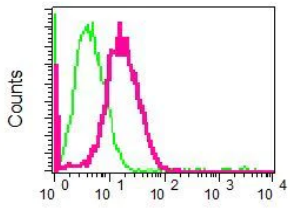
We do not recommend this combination. It is not covered by our product promise.

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.

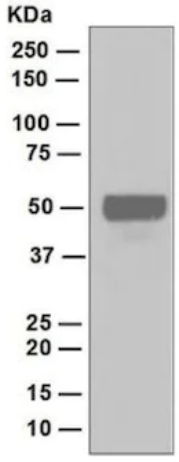
5 product images



Flow Cytometry (Intracellular) - Anti-DP1 antibody [EPR4959(2)] - BSA and Azide free (ab247957)

DP1 Flow Cytometry (Intracellular) staining using rabbit Anti-DP1 antibody

This data was developed using ab124678, the same antibody clone in a different buffer formulation.
ab124678 at 1/10 dilution staining DP1 in permeabilized HeLa cells by intracellular flow cytometry (red). Rabbit IgG negative control (green).



Western blot - Anti-DP1 antibody [EPR4959(2)] - BSA and Azide free (ab247957)

DP1 Western blot staining of Raji cell lysate using rabbit Anti-DP1 antibody

This data was developed using ab124678, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-DP1 antibody [EPR4959(2)] (ab124678) at 1/10000 dilution

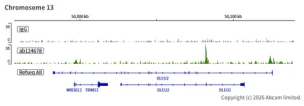
All lanes:
Raji cell lysate at 10 µg

Secondary

All lanes:
Goat anti-Rabbit HRP at 1/2000 dilution

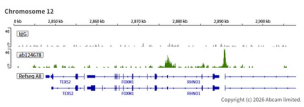
Predicted band size: 45 kDa

Observed band size: 49 kDa



ChIC/CUT&RUN sequencing - Anti-DP1 antibody [EPR4959(2)] - BSA and Azide free (ab247957)

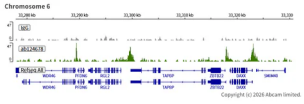
This data was developed using ab124678, the same antibody clone in a different buffer formulation.
ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5 x 10^5 HepG2 (human hepatocellular carcinoma epithelial cell) cells and 5 µg of ab124678 [EPR4959(2)]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



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