abcam

ab216576

Anti-DUSP4 antibody [EPR19881]

Anti-DUSP4 antibody [EPR19881] (ab216576) is a rabbit monoclonal antibody detecting DUSP4 in **Western Blot, Flow Cytometry (Intra), IP, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR19881
Purification technique	Affinity purification Protein A
Concentration	0.748 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	This product gave a positive signal in A549 (DUSP4 knockout A549 cells used as a negative control) fixed with 100% methanol (5 min).

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/60
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information DUSP4

Function	Regulates mitogenic signal transduction by dephosphorylating both Thr and Tyr residues on MAP kinases ERK1 and ERK2.

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

What is this antibody validated in?
Anti-DUSP4 antibody [EPR19881] (ab216576) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of DUSP4?
Anti-DUSP4 [EPR19881] (ab216576) specifically detects a band for DUSP4 (UniProt: Q13115) at a molecular weight of 43kDa.

Trusted by the scientific community
Anti-DUSP4 [EPR19881] (ab216576) was first used in a scientific publication in 2016 and has been cited over 10 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-DUSP4 antibody [EPR19881] (ab216576) has been confirmed by Western blot testing in DUSP4 Knockout A549 cells.

Other related products
We have a range of other formats of antibody clone [EPR19881] also available for your convenience: ab216576, Carrier free - ab222487, Alexa Fluor® 647 - ab303592

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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.

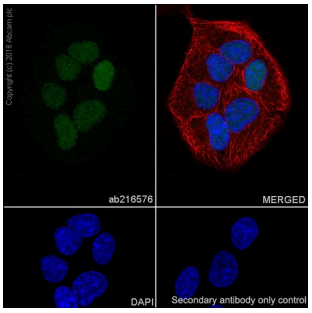
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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11 product images



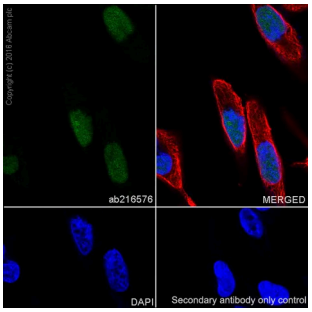
Immunocytochemistry/ Immunofluorescence - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DUSP4 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized A549 (Human lung carcinoma cell line) cells labeling DUSP4 with ab216576 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on A549 cell line.

The nuclear counterstain is DAPI (blue). Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



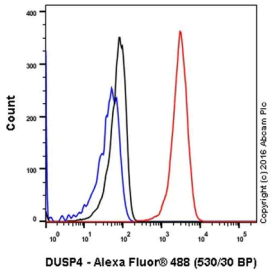
Immunocytochemistry/ Immunofluorescence - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DUSP4 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MDA-MB-231 (Human breast adenocarcinoma cell line) cells labeling DUSP4 with ab216576 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on MDA-MB-231 cell line.

The nuclear counterstain is DAPI (blue). Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

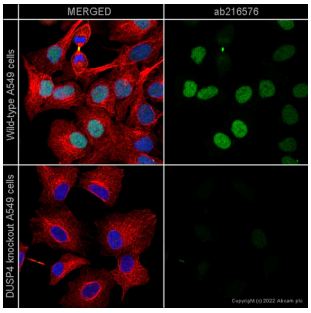
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Flow Cytometry (Intracellular) staining using rabbit Anti-DUSP4 antibody

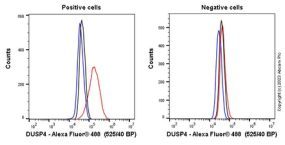
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed MDA-MB-231 (Human breast adenocarcinoma cell line) cells labeling DUSP4 with ab216576 at 1/60 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DUSP4 antibody

ab216576 staining DUSP4 in wild-type A549 cells, with negative expression in DUSP4 knockout A549 cells. The cells were fixed with 100% methanol (5 min), permeabilised with 0.1% Triton x-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab216576 at 1 µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin at 0.5 µg/ml. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150119, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647), pre-adsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Flow Cytometry (Intracellular) - Anti-DUSP4 antibody [EPR19881] (ab216576)

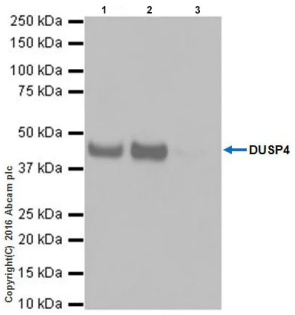
DUSP4 Flow Cytometry (Intracellular) staining using rabbit Anti-DUSP4 antibody

Flow cytometry overlay histogram showing left wild-type A549 positive cells and right negative DUSP4 knockout A549 stained with ab216576 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab216576) (1x 106 in 100µl at 1.0 µg/ml (1/1990)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (black line) was used at the same concentration and conditions as the primary antibody. Unlabelled sample was also used as a control (blue line).

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



Immunoprecipitation - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 was immunoprecipitated from 0.35mg of MDA-MB-231 (Human breast adenocarcinoma cell line) whole cell lysate with ab216576 at 1/30 dilution.
Western blot was performed from the immunoprecipitate using ab216576 at 1/500 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1,000 dilution

Lane 1: MDA-MB-231 whole cell lysate, 10µg (Input).

Lane 2: ab216576 IP in MDA-MB-231 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab216576 in MDA-MB-231 whole cell lysate.

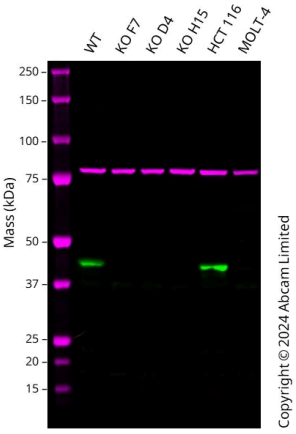
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

All lanes:
Immunoprecipitation - Anti-DUSP4 antibody [EPR19881] (ab216576)

Predicted band size: 43 kDa

Observed band size: 43 kDa



Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Western blot staining using rabbit Anti-DUSP4 antibody

Western blot: Anti-DUSP4 antibody [EPR19881] (ab216576) staining at 1/1000 dilution, shown in green; Mouse anti-CANX [CANX/1543] (ab238078) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab216576 was shown to bind specifically to DUSP4. A band was observed at 40 kDa in wild-type A549 cell lysates with no signal observed at this size in DUSP4 knockout cell line. To generate this image, wild-type and DUSP4 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lanes 2 - 3:
DUSP4 knockout A549 cell lysate at 20 µg

Lane 4:
DUSP4 knockout A549 H15 cell lysate at 20 µg

Lane 5:
HCT 116 cell lysate at 20 µg

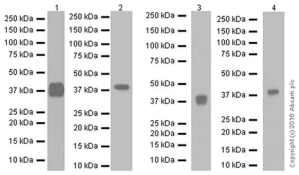
Lane 6:
MOLT-4 cell lysate at 20 µg

Secondary

All lanes:
Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Observed band size: 40 kDa



Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Western blot staining using rabbit Anti-DUSP4 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1/2:3 minutes; Lane 3: 30 seconds; Lane 4: 1 second.

All lanes:
Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576) at 1/1000 dilution

Lane 1:
MDA-MB-231 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 2:
A549 (Human lung carcinoma cell line) whole cell lysate at 10 µg

Lane 3:
SK-BR-3 (Human mammary gland adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 4:
HCT 116 (Human colorectal carcinoma cell line) whole cell lysate at 10 µg

Secondary

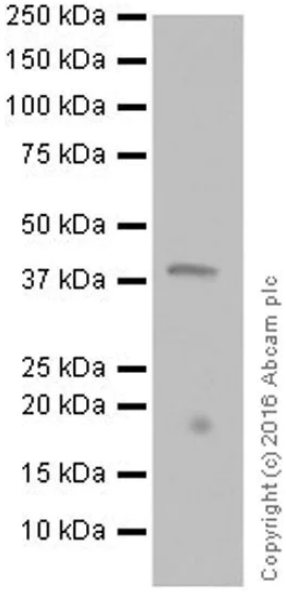
Lanes 1 - 2:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lanes 3 - 4:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 43 kDa

Observed band size: 43 kDa

Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576)



DUSP4 Western blot staining of Human breast cancer lysate using rabbit Anti-DUSP4 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576) at 1/1000 dilution

All lanes:
Human breast cancer lysate at 10 µg

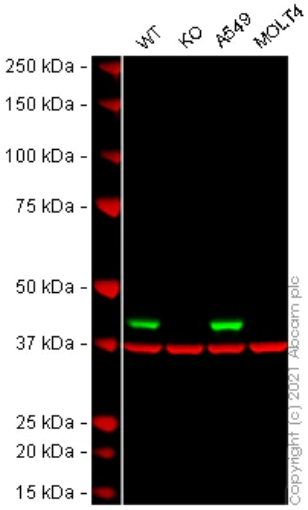
Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 43 kDa

Observed band size: 43 kDa

Exposure time: 3min



Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Western blot staining using rabbit Anti-DUSP4 antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab216576 observed at 40 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.
ab216576 was shown to react with DUSP4 in wild-type A549 cells in Western blot with loss of signal observed in DUSP4 knockout cell line ab273859 (DUSP4 knockout cell lysate ab273813). Wild-type A549 and DUSP4 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab216576 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated 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 in 20000 dilution for 1 h at room temperature before imaging.

All lanes:
Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
DUSP4 knockout A549 cell lysate at 20 µg

Lane 2:
Western blot - Human DUSP4 knockout A549 cell line (ab273859)

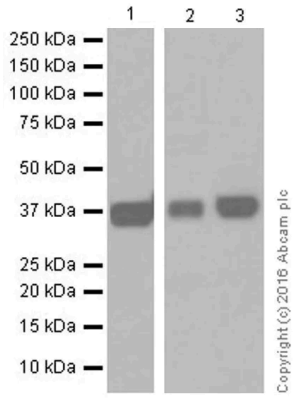
Lane 3:
A549 cell lysate at 20 µg

Lane 4:
MOLT-4 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 43 kDa

Observed band size: 40 kDa



Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576)

DUSP4 Western blot staining using rabbit Anti-DUSP4 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1:3 minutes; Lane 2/3: 15 seconds.

All lanes:
Western blot - Anti-DUSP4 antibody [EPR19881] (ab216576) at 1/1000 dilution

Lane 1:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 2:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate at 10 µg

Lane 3:
C6 (Rat glial tumor cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 43 kDa

Observed band size: 43 kDa

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