abcam

ab76310

Anti-DUSP6 antibody [EPR129Y]

Anti-DUSP6 antibody [EPR129Y] (ab76310) is a rabbit monoclonal antibody detecting DUSP6 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P**. Suitable for **Human, Mouse, Rat**.

- Clone EPR129Y is the most cited clone to DUSP6
- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 50 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	EPR129Y
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

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

IP

Tested

Species	Mouse
Dilution info	1/40 - 1/50
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/500 - 1/1000
Notes	-

Species	Rat
Dilution info	1/500 - 1/1000
Notes	-

Species	Human
Dilution info	1/500 - 1/1000
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/20 - 1/200
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	1/20 - 1/200
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information DUSP6

Function	Dual specificity protein phosphatase, which mediates dephosphorylation and inactivation of MAP kinases (PubMed:8670865). Has a specificity for the ERK family

(PubMed:8670865). Plays an important role in alleviating chronic postoperative pain (By similarity). Necessary for the normal dephosphorylation of the long-lasting phosphorylated forms of spinal MAPK1/3 and MAP kinase p38 induced by peripheral surgery, which drives the resolution of acute postoperative allodynia (By similarity). Also important for dephosphorylation of MAPK1/3 in local wound tissue, which further contributes to resolution of acute pain (By similarity). Promotes cell differentiation by regulating MAPK1/MAPK3 activity and regulating the expression of AP1 transcription factors (PubMed:29043977).

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

Product Specifications
Anti-DUSP6 antibody [EPR129Y] (ab76310) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), IHC-P, IP, WB in human, mouse, rat samples.
Anti-DUSP6 antibody [EPR129Y] (ab76310) specifically detects DUSP6 (UniProt ID: Q16828; Molecular weight: 42kDa) and is sold in 100 µL and 1 mL selling sizes.

Quality and Validation
Abcam's high quality manufacturing and validation processes ensure Anti-DUSP6 antibody [EPR129Y] (ab76310) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.
The specificity of Anti-DUSP6 antibody [EPR129Y] (ab76310) has been confirmed by testing in knockout samples.
Anti-DUSP6 antibody [EPR129Y] (ab76310) has been cited over 58 times in peer reviewed journals and is trusted by the scientific community.
Anti-DUSP6 antibody [EPR129Y] (ab76310) has 16 independent reviews from customers.

Related Products
Antibody clone EPR129Y is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 594, PE, APC, HRP, Alkaline Phosphatase, Alexa Fluor® 488, Alexa Fluor® 647, Alexa Fluor® 555, Alexa Fluor® 568, Alexa Fluor® 750 (ab207877, ab305641, ab305642, ab305643, ab308919, ab309852, ab310218, ab312194, ab312682, ab321724).
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.

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

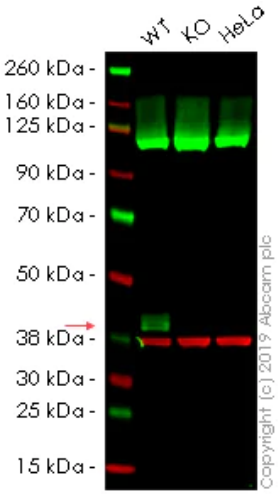
We do not recommend this combination. It is not covered by our product promise.

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.

12 product images



Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Western blot staining using rabbit Anti-DUSP6 antibody

Lanes 1 - 3: Merged signal (red and green). Green - ab76310 observed at 42 kDa. Red - loading control, ab130007, observed at 130 kDa.
ab76310 was shown to recognize in wild-type A431 cells as signal was lost at the expected MW in DUSP6 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and DUSP6 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. ab76310 and ab130007 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/500 dilution and 1/20000 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 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/500 dilution

Lane 1:
Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate at 20 µg

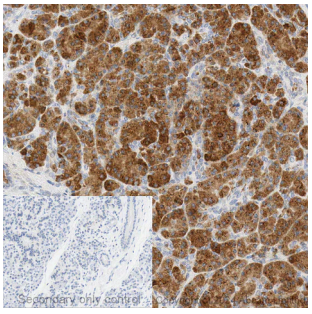
Lane 2:
DUSP6 knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate at 20 µg

Lane 2:
Western blot - Human DUSP6 knockout A-431 cell line (ab261885)

Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 42 kDa

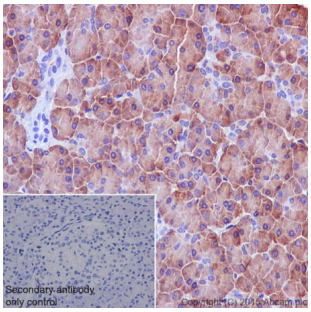


Immunohistochemistry - Anti-DUSP6 antibody [EPR129Y] (ab76310)

Immunohistochemical analysis of formalin fixed paraffin embedded human pancreas labelling DUSP6 with ab76310 at a concentration of 0.5 µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH 8.5 for 32 mins.

ab76310 anti-DUSP6 [EPR129Y] was incubated for 16 mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

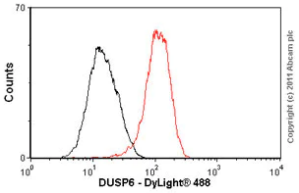
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-DUSP6 antibody

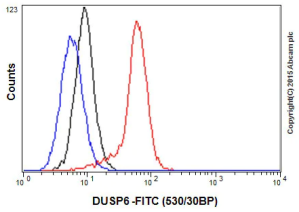
Immunohistochemical staining of paraffin embedded human pancreas with purified ab76310 at a working dilution of 1/100. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Flow Cytometry (Intracellular) - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Flow Cytometry (Intracellular) staining using rabbit Anti-DUSP6 antibody

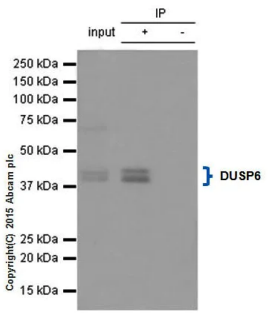
Overlay histogram showing HeLa cells stained with unpurifiedab76310 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab76310, 1/20 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde/permeabilized with 0.1% PBS-Tween 20 used under the same conditions.



Flow Cytometry (Intracellular) - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Flow Cytometry (Intracellular) staining using rabbit Anti-DUSP6 antibody

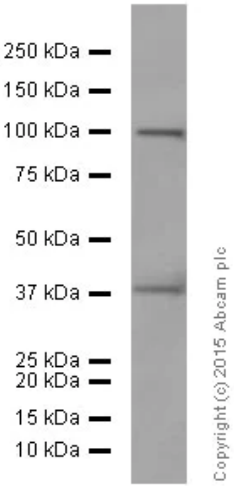
Overlay histogram showing NIH-3T3 cells fixed in 4% PFA and stained with purified ab76310 at a dilution of 1 in 200 (red line). The secondary antibody used was FITC goat anti-rabbit at a dilution of 1 in 500. Rabbit monoclonal IgG was used as an isotype control (black line) and cells incubated in the absence of both primary and secondary antibody were used as a negative control (blue line).



Immunoprecipitation - Anti-DUSP6 antibody [EPR129Y] (ab76310)

ab76310 (purified) at 1/20 immunoprecipitating DUSP6 in 10 µg NIH-3T3 (Lanes 1 and 2, observed at 42 and 44 kDa). Lane 3 - PBS. For western blotting, a HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG was used as the secondary antibody (1/1500). Blocking buffer and concentration: 5% NFDM/TBST Dilution buffer and concentration: 5% NFDM/TBST
All lanes:
Immunoprecipitation - Anti-DUSP6 antibody [EPR129Y] (ab76310)

Predicted band size: 42 kDa



Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
ab76310 detects an unspecific band around 100 kDa in human materials.

All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/5000 dilution

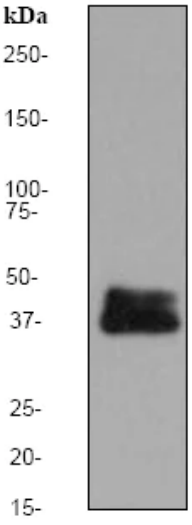
All lanes:
HepG2 cell lysate at 20 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa, 44 kDa



Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/500 dilution

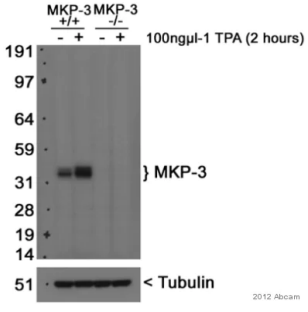
All lanes:
3T3 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa, 44 kDa



This image was taken from a customer review by Graeme Stewart.

Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/4000 dilution

Lane 1:
Marker

Lane 2:
Lysate from wild type primary murine embryonic fibroblasts (MEFs) untreated at 10 µg

Lane 3:
Lysate from wild type primary murine embryonic fibroblasts (MEFs) treated with 100ngµl-1, 12-O-tetradecanoylphorbol-13-acetate (TPA) for 2 hours at 10 µg

Lane 4:
Lysate from MKP-3 null primary murine embryonic fibroblasts (MEFs) untreated at 10 µg

Lane 5:

Lysate from MKP-3 null primary murine embryonic fibroblasts (MEFs) treated with 100ngµl-1, 12-O-tetradecanoylphorbol-13-acetate (TPA) for 2 hours at 10 µg

Secondary

All lanes:
Goat anti Rabbit HRP conjugate at 1/10000 dilution

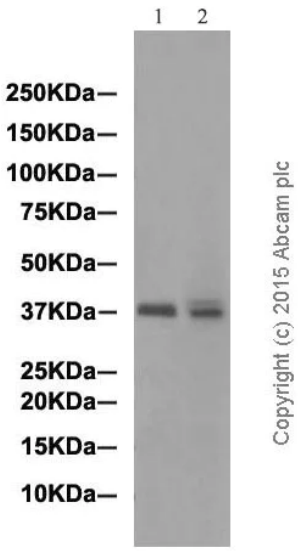
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 2min



Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Western blot staining using rabbit Anti-DUSP6 antibody

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/1000 dilution

Lane 1:
rat brain lysate at 20 µg

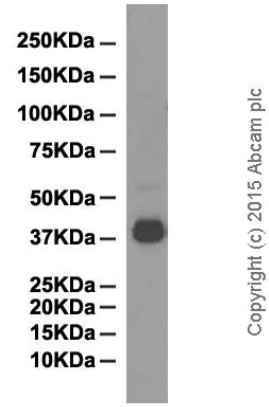
Lane 2:
NIH/3T3 cell lysate at 20 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa, 44 kDa



Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

DUSP6 Western blot staining of mouse brain using rabbit Anti-DUSP6 antibody

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310) at 1/1000 dilution

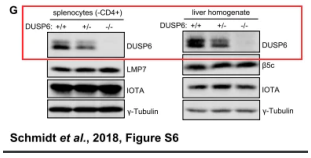
All lanes:
mouse brain at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa, 44 kDa



Schmidt *et al.*, 2018, Figure S6

Schmidt C et al., Front Immunol, 9, 2386, 2018
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Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

Immunoblot analysis of indicated proteins in splenocytes after CD4+ sort, liver homogenate or purified CD4+ T cells from WT, DUSP6+/- or DUSP6-/- mice to confirm knockout or heterozygosity for DUSP6 at protein level.
This image was generated using ab220811, the same antibody but in a PBS-only buffer formulation.

All lanes:
Western blot - Anti-DUSP6 antibody [EPR129Y] (ab76310)

Predicted band size: 42 kDa

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