

Anti-MEKK2 antibody [EP626Y] - 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	EP626Y
Purification technique	Affinity purification Protein A
Concentration	1.068 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested	
Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - 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	-

IHC-P

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Expected

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

Target data

[See full target information MAP3K2](#) 

Function	Component of a protein kinase signal transduction cascade. Regulates the JNK and ERK5 pathways by phosphorylating and activating MAP2K5 and MAP2K7 (By similarity). Plays a role in caveolae kiss-and-run dynamics.
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Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab240926 is the carrier-free version of ab33918.

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

MEKK2 also known as MAP3K2 is a kinase enzyme with an approximate mass of 70 kDa. It functions as part of the MAP kinase signaling pathway where it phosphorylates downstream proteins playing an essential role in transmitting signals within cells. This protein is mainly expressed in tissues such as the brain heart and liver. It acts by activating specific MAP kinase pathways facilitating various cellular responses to external stimuli.

Biological function summary

This kinase serves as a critical mediator in cellular processes like proliferation differentiation and apoptosis. MEKK2 forms part of larger signaling complexes including the MAP3K complex where it regulates multiple cellular activities. Through its kinase activity MEKK2 passes on signals that affect gene expression and cellular stress responses impacting how cells react to their environment.

Pathways

MEKK2 functions prominently in the MAPK signaling and NF-κB pathways. These pathways involve signal transduction mechanisms that MEKK2 influences through

its interactions with related proteins such as MEK5 and ERK5. By modulating these pathways MEKK2 participates in a variety of cellular responses including inflammation and immune responses.

Associated diseases and disorders

MEKK2 has associations with conditions like cancer and inflammatory diseases. Aberrant expression of MEKK2 can affect the behavior of cancer cells due to its influence on the MAPK pathway's signaling leading to unchecked cell growth. Additionally MEKK2 interacts with proteins like NF- κ B which are important in inflammation thereby implicating it in disorders related to immune system dysfunctions.

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.

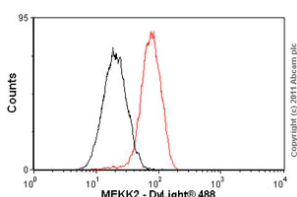
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

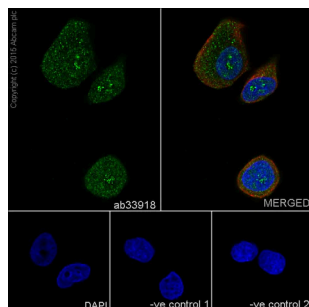


Flow Cytometry (Intracellular) - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

MEKK2 Flow Cytometry (Intracellular) staining using rabbit Anti-MEKK2 antibody

Overlay histogram showing HepG2 cells stained with unpurified [ab33918](#) (red line). The cells were fixed with 80% 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 ([ab33918](#), 1/50 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 IgG (monoclonal) (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



Immunocytochemistry/ Immunofluorescence - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

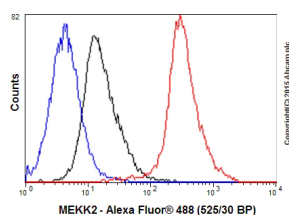
MEKK2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MEKK2 antibody

[ab33918](#) staining MEKK2 in MCF-7 (human breast carcinoma) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/100. A goat anti rabbit IgG (Alexa Fluor® 488) ([ab150077](#)) was used as the secondary antibody at a dilution of 1/1000. [ab7291](#) and [ab150120](#) were used as counterstains for primary antibody [ab75748](#) and secondary antibody [ab150077](#) respectively and DAPI was used as a nuclear counterstain.

Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody ([ab150120](#))

Negative control 2: Mouse primary antibody ([ab7291](#)) and anti-rabbit secondary antibody ([ab150077](#))

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



Flow Cytometry (Intracellular) - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

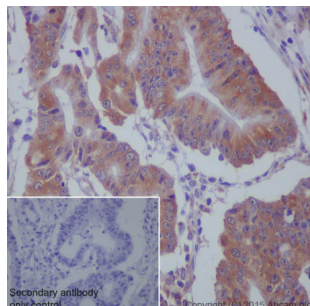
MEKK2 Flow Cytometry (Intracellular) staining using rabbit Anti-MEKK2 antibody

[ab33918](#) staining MEKK2 in Jurkat (human acute T cell leukemia) cells by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/120. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/500 was used as the secondary antibody.

Isotype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

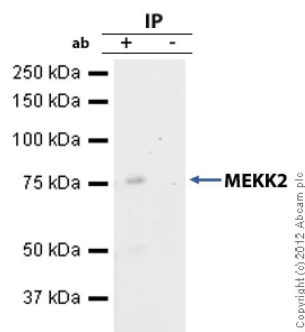
MEKK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MEKK2 antibody

[ab33918](#) staining MEKK2 in human colon carcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were

incubated with primary antibody at a dilution of 1/100. A goat anti-rabbit IgG H&L (HRP) [ab97051](#) was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



Immunoprecipitation - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

MEKK2 was immunoprecipitated using 0.5mg HepG2 whole cell extract, 10µg of unpurified Rabbit monoclonal [EP626Y] to MEKK2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, HepG2 whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with [ab33918](#).

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) ([ab99697](#)) .

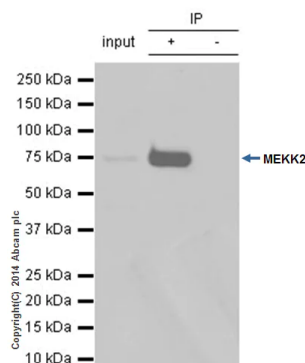
Band: 75kDa: MEKK2.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).

All lanes:

Immunoprecipitation - Anti-MEKK2 antibody [EP626Y] ([ab33918](#))

Predicted band size: 70 kDa



Immunoprecipitation - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

[ab33918](#) immunoprecipitating MEKK2. 10µg of cell lysate was incubated with primary antibody at a dilution of 1/40 and VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at a dilution of 1/10000.

Lane 1: HepG2 (human hepatocellular carcinoma) whole cell lysate (10ug)

Lane 2: HepG2 (human hepatocellular carcinoma) whole cell lysate

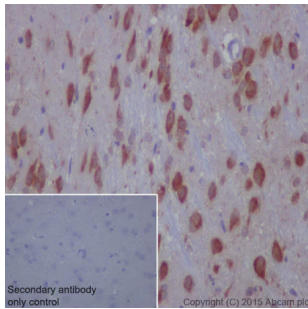
Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab33918](#) in HepG2 (human hepatocellular carcinoma) whole cell lysate

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).

All lanes:

Immunoprecipitation - Anti-MEKK2 antibody [EP626Y] ([ab33918](#))

Predicted band size: 70 kDa



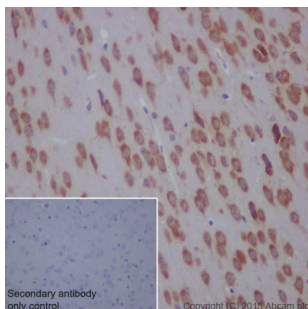
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

MEKK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MEKK2 antibody

[ab33918](#) staining MEKK2 in rat cerebral cortex tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/100. A goat anti-rabbit IgG H&L (HRP) [ab97051](#) was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



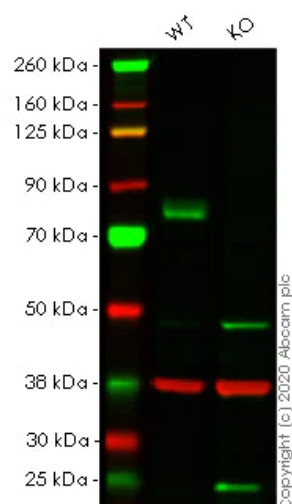
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

MEKK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MEKK2 antibody

[ab33918](#) staining MEKK2 in mouse cerebral cortex tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/100. A goat anti-rabbit IgG H&L (HRP) [ab97051](#) was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab33918](#)).



Western blot - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

This data was developed using the same antibody clone in a different buffer formulation ([ab33918](#)).

Lanes 1- 2: Merged signal (red and green). Green - [ab33918](#) observed at 75 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) observed at 37 kDa.

[ab33918](#) was shown to react with MEKK2 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line [ab264944](#) (knockout cell lysate [ab257520](#)) was used. Wild-type HeLa and MAP3K2 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. [ab33918](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:

Western blot - Anti-MEKK2 antibody [EP626Y] ([ab33918](#)) at 1/10000 dilution

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

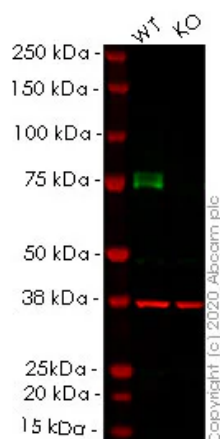
Lane 2:
MAP3K2 knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human MAP3K2 (MEKK2) knockout HeLa cell line ([ab264944](#))

Performed under reducing conditions.

Predicted band size: 70 kDa

Observed band size: 75 kDa



Western blot - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free ([ab240926](#))

MEKK2 Western blot staining using rabbit Anti-MEKK2 antibody

This data was developed using the same antibody clone in a different buffer formulation ([ab33918](#)).

Lanes 1- 2: Merged signal (red and green). Green - [ab33918](#) observed at 75 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) observed at 37 kDa.

[ab33918](#) was shown to react with MEKK2 in wild-type A549 cells in western blot. Loss of signal was observed when knockout cell line [ab267153](#) (knockout cell lysate [ab257522](#)) was used. Wild-type A549 and MAP3K2 knockout A549 cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. [ab33918](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) overnight at 4°C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:

Western blot - Anti-MEKK2 antibody [EP626Y] ([ab33918](#)) at 1/10000 dilution

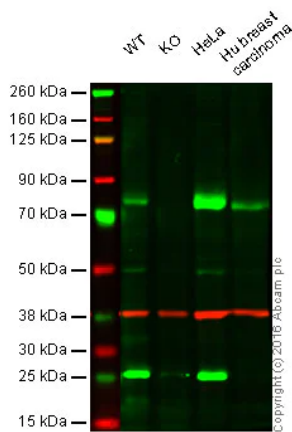
Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
Western blot - Human MAP3K2 (MEKK2) knockout A549 cell lysate ([ab257522](#)) at 20 µg

Performed under reducing conditions.

Predicted band size: 70 kDa

Observed band size: 75 kDa



Western blot - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

MEKK2 Western blot staining using rabbit Anti-MEKK2 antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)

Lane 2: MEKK2 knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: Human breast carcinoma lysate (20 µg)

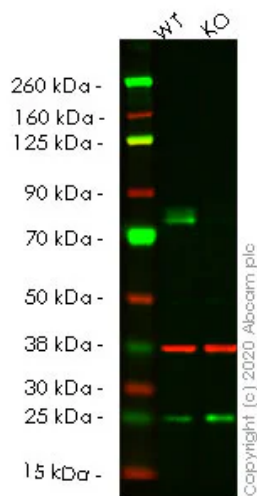
Lanes 1 - 4: Merged signal (red and green). Green - [ab33918](#) observed at 75 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

[ab33918](#) was shown to recognize MEKK2 when MEKK2 knockout samples were used, along with additional cross-reactive bands. Wild-type and MEKK2 knockout samples were subjected to SDS-PAGE. [ab33918](#) and [ab8245](#) (loading control to GAPDH) were both diluted 1/10 000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/10000 dilution for 1 h 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 ([ab33918](#)).

All lanes:

Western blot - Anti-MEKK2 antibody [EP626Y] ([ab33918](#))

Predicted band size: 70 kDa



Western blot - Anti-MEKK2 antibody [EP626Y] - BSA and Azide free (ab240926)

MEKK2 Western blot staining using rabbit Anti-MEKK2 antibody

This data was developed using the same antibody clone in a different buffer formulation ([ab33918](#)).

Lanes 1- 2: Merged signal (red and green). Green - [ab33918](#) observed at 75 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) observed at 37 kDa.

[ab33918](#) was shown to react with MEKK2 in wild-type A549 cells in western blot. Loss of signal was observed when knockout cell line [ab267152](#) (knockout cell lysate [ab257521](#)) was used. Wild-type A549 and MAP3K2 knockout A549 cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. [ab33918](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) overnight at 4°C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:

Western blot - Anti-MEKK2 antibody [EP626Y] ([ab33918](#)) at 1/10000 dilution

Lane 1:

Wild-type A549 cell lysate at 20 µg

Lane 2:

Western blot - Human MAP3K2 (MEKK2) knockout A549 cell lysate ([ab257521](#)) at 20 µg

Performed under reducing conditions.

Predicted band size: 70 kDa

Observed band size: 75 kDa

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