abcam

ab265586

Anti-MEK2 antibody [BLR079G]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 99% Borate buffered saline, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human MAP2K2 aa 1-50. The exact immunogen used to generate this antibody is proprietary information. Database link P36507
Clone number	BLR079G
Purification technique	Affinity purification
Purification notes	Purified from TCS.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

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

ICC

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with ICC staining protocol.

Expected

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

IP

Tested

Species	Human
Dilution info	-
Notes	20 µl per mg lysate.

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µL for 10^6 Cells
Notes	-

Expected

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

Target data

See full target information MAP2K2

Function	Catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in MAP kinases. Activates the ERK1 and ERK2 MAP kinases (By similarity). Activates BRAF in a KSR1 or KSR2-dependent manner; by binding to KSR1 or KSR2 releases the inhibitory intramolecular interaction between KSR1 or KSR2 protein kinase and N-terminal domains which promotes KSR1 or KSR2-BRAF dimerization and BRAF activation (PubMed:29433126).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MEK2 or MAP2K2 is a protein kinase with a mass of approximately 44 kDa. This kinase part of the Mitogen-Activated Protein Kinase (MAPK) pathway primarily functions mechanically as a dual-specificity protein kinase. It phosphorylates both serine/threonine and tyrosine residues on its substrate proteins. MEK2 is largely expressed in various tissues including the brain and heart. It serves an important role in relaying extracellular signals within cells leading to diverse cellular responses.
Biological function summary	MEK2 participates in signal transduction pathways mediating cell division differentiation and apoptosis. As a part of the MAPK signaling cascade it operates downstream of RAS and RAF proteins. MEK2 forms a complex with MEK1 another closely related kinase to ensure proper signal relay. This complex plays a significant role in the regulation of cellular responses to growth signals and stress.
Pathways	MEK2 is intricately connected to the ERK1/2 pathway one of the key pathways it is involved in. ERK1/2 (Extracellular signal-Regulated Kinases) further transmits signals to the cell's nuclear components regulating gene expression critically. MEK2 directly phosphorylates and activates ERK1 and ERK2 facilitating their role in transcription cell cycle regulation and maintenance of cell integrity. The interaction of MEK2 with proteins like BRAF and CRAF along the MAPK pathway amplifies the signal transduction for various growth factors and hormones.
Associated diseases and disorders	MEK2 has a notable association with cancer particularly melanoma and colorectal cancer. It often becomes aberrantly activated leading to unregulated cell proliferation. The connection of MEK2 to ERK1/2 proteins in these malignancies makes it a potential therapeutic target. Furthermore MEK2 mutations can contribute to Noonan syndrome a disorder that affects multiple body systems

marking its relationship with genetic abnormalities and developmental issues. Researchers have been investigating MEK inhibitors to target these disorders highlighting the importance of understanding MEK2's role in disease contexts.

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

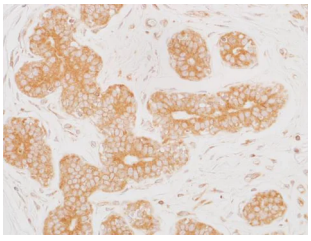
We do not recommend this combination. It is not covered by our product promise.

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.

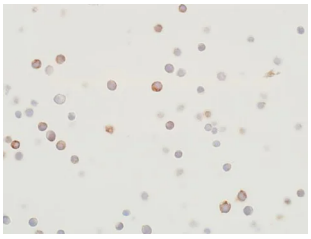
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEK2 antibody [BLR079G] (ab265586)

MEK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MEK2 antibody

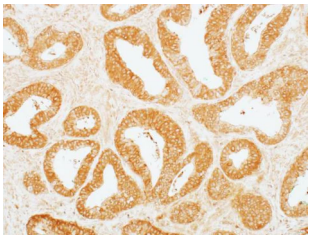
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human breast carcinoma tissue labeling MEK2 with ab265586 at 1/100 dilution. Detection: DAB.



Immunocytochemistry - Anti-MEK2 antibody [BLR079G] (ab265586)

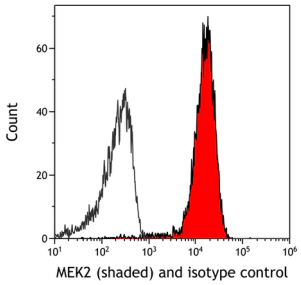
MEK2 Immunocytochemistry staining using rabbit Anti-MEK2 antibody

Immunocytochemical analysis of formalin-fixed, paraffin-embedded KG-1 cells labeling MEK2 with ab265586 at 1/100 dilution. Detection: DAB.



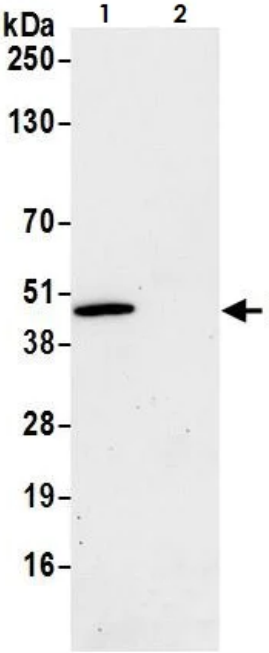
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEK2 antibody [BLR079G] (ab265586)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human prostate carcinoma tissue labeling MEK2 with ab265586 at 1/100 dilution. Detection: DAB.



Flow Cytometry - Anti-MEK2 antibody [BLR079G] (ab265586)

Flow cytometry overlay histogram of 4% formaldehyde fixed Jurkat cells permeabilized with 90% methanol labeling human MEK2 with ab265586 at 1 µl per 1 x 10^6 cells (shaded) compared with a Isotype control (unshaded). Secondary antibody details: DyLight® 488-conjugated goat anti-rabbit IgG (ab96883).



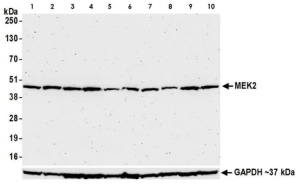
Immunoprecipitation - Anti-MEK2 antibody [BLR079G] (ab265586)

MEK2 was immunoprecipitated from 1mg of HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate with ab265586 at 20 µl/mg lysate. Western blot was performed from the immunoprecipitate using ab265586 at 1/1000 dilution.
Lane 1: ab265586 IP in HEK-293T whole cell lysate.
Lane 2: Control IgG.
Exposure time: 30 secs.

Cells prepared using NETN lysis buffer.

All lanes:
Immunoprecipitation - Anti-MEK2 antibody [BLR079G] (ab265586)

Predicted band size: 44 kDa



Western blot - Anti-MEK2 antibody [BLR079G] (ab265586)

MEK2 Western blot staining using rabbit Anti-MEK2 antibody

Cells prepared using NETN lysis buffer.
All lanes:
Western blot - Anti-MEK2 antibody [BLR079G] (ab265586) at 1/1000 dilution

Lane 1:
HepG2 whole cell lysate at 50 µg

Lane 2:
HEK-293T whole cell lysate at 50 µg

Lane 3:
A549 whole cell lysate at 50 µg

Lane 4:
Jurkat whole cell lysate at 50 µg

Lane 5:
RKO whole cell lysate at 50 µg

Lane 6:
U-2 OS whole cell lysate at 50 µg

Lane 7:
LNCaP whole cell lysate at 50 µg

Lane 8:
HeLa whole cell lysate at 50 µg

Lane 9:
NIH/3T3 whole cell lysate at 50 µg

Lane 10:
TCMK whole cell lysate at 50 µg

Predicted band size: 44 kDa

Exposure time: 3min

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