abcam

Product datasheet

HRP Anti-MEK1 antibody [E342] ab193987

KO VALIDATED Recombinant RabMAb

4 Images

Overview

Product name	HRP Anti-MEK1 antibody [E342]
Description	HRP Rabbit monoclonal [E342] to MEK1
Host species	Rabbit
Conjugation	HRP
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Cow
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 cells and cell lysate. IHC-P: FFPE human colon tissue sections.
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	E342
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab193987 in the following tested applications.

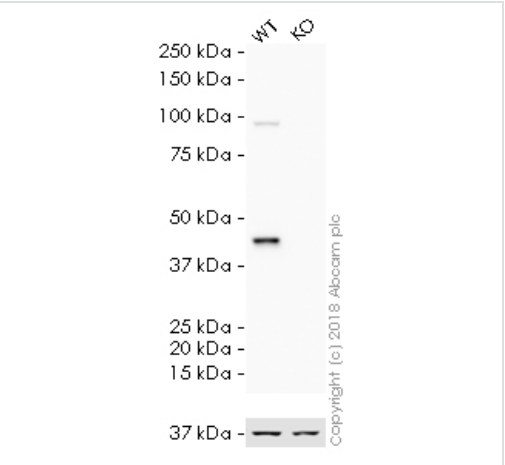
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000. Detects a band of approximately 45 kDa (predicted molecular weight: 43 kDa).
IHC-P		1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	Catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in MAP kinases. Activates ERK1 and ERK2 MAP kinases.
Tissue specificity	Widely expressed, with extremely low levels in brain.
Involvement in disease	Defects in MAP2K1 are a cause of cardiofaciocutaneous syndrome (CFC syndrome) [MIM:115150]; also known as cardio-facio-cutaneous syndrome. CFC syndrome is characterized by a distinctive facial appearance, heart defects and mental retardation. Heart defects include pulmonic stenosis, atrial septal defects and hypertrophic cardiomyopathy. Some affected individuals present with ectodermal abnormalities such as sparse, friable hair, hyperkeratotic skin lesions and a generalized ichthyosis-like condition. Typical facial features are similar to Noonan syndrome. They include high forehead with bitemporal constriction, hypoplastic supraorbital ridges, downslanting palpebral fissures, a depressed nasal bridge, and posteriorly angulated ears with prominent helices. The inheritance of CFC syndrome is autosomal dominant.
Sequence similarities	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylation on Ser/Thr by MAP kinase kinase kinases (RAF or MEKK1) regulates positively the kinase activity. Acetylation by Yersinia yopJ prevents phosphorylation and activation, thus blocking the MAPK signaling pathway.

Images



Western blot - HRP Anti-MEK1 antibody [E342] (ab193987)

All lanes : HRP Anti-MEK1 antibody [E342] (ab193987) at 1/5000 dilution

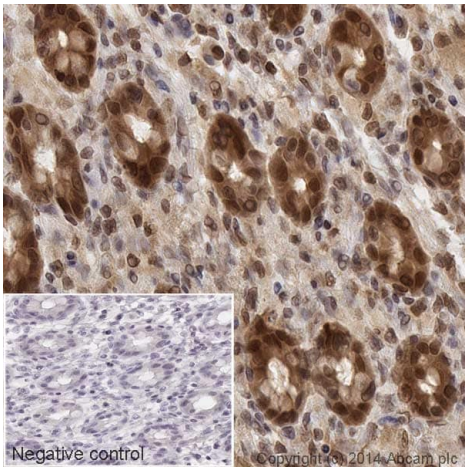
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : MAP2K1 (MEK1) knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 43 kDa
Observed band size: 43 kDa

Exposure time: 1 minute

ab193987 was shown to recognize MEK1 in wild-type HAP1 cells as signal was lost at the expected MW in MAP2K1 (MEK1) knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and MAP2K1 (MEK1) knockout samples were subjected to SDS-PAGE. Ab193987 and **ab184095** (Mouse monoclonal [mAbcam 9484] to GAPDH - Loading Control (Alexa Fluor® 680) loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/1000 dilution respectively. The loading control was imaged using the Licor Odyssey CLx prior to blots being developed with ECL technique.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-MEK1 antibody [E342] (ab193987)

IHC image of MEK1 staining in a section of formalin-fixed paraffin-embedded human normal colon*. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins, and incubated overnight at +4°C with ab193987 at a working dilution of 1/500. DAB was used as the chromogen (**ab103723**), diluted 1/100 and incubated for 10min at room temperature. The section was counterstained with haematoxylin and mounted with DPX. The inset negative control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

Western blot - HRP Anti-MEK1 antibody [E342] (ab193987)

HRP Anti-MEK1 antibody [E342] (ab193987) at 1/5000 dilution + A431 (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 43 kDa
Observed band size: 45 kDa

Exposure time: 10 seconds

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab193987 overnight at 4°C. Antibody binding was visualised using ECL development solution **ab133406**.

HRP Anti-MEK1 antibody [E342] (ab193987)

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