abcam

Product datasheet

Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free ab214445

Recombinant RabMAb

2 References 7 Images

Overview

Product name	Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free
Description	Rabbit monoclonal [EPR3338] to MEK1 (phospho S298) - BSA and Azide free
Host species	Rabbit
Specificity	**ab96379** detects MEK1 phosphorylated at threonine 298. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
Tested applications	**Suitable for:** Flow Cyt (Intra), IHC-P, WB, ICC/IF **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Flow Cyt (intra): HeLa cells; ICC/IF: HeLa cells; IHC-P: Human ovarian carcinoma tissue; WB; Rat and mouse skeletal muscle, HeLa cells.
General notes	ab214445 is the carrier-free version of **ab96379**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. 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 production

For more information **see here**.

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. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR3338
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab214445 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
Flow Cyt (Intra)		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 45 kDa (predicted molecular weight: 43 kDa).
ICC/IF		Use at an assay dependent concentration.

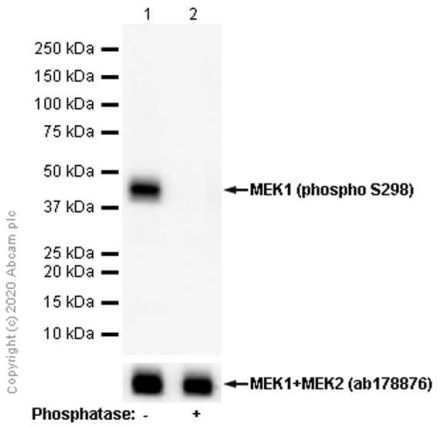
Application notes Is unsuitable for IP.

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 - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

All lanes : Anti-MEK1 (phospho S298) antibody [EPR3338] (**ab96379**) at 1/1000 dilution (Purified)

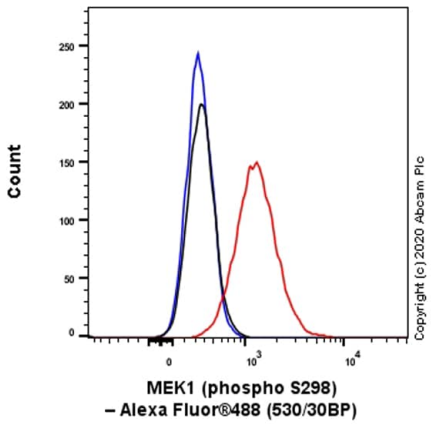
Lane 1 : Rat skeletal muscle lysate

Lane 2 : Rat skeletal muscle lysate, the membrane treated with phosphatase for 1 hour

Secondary

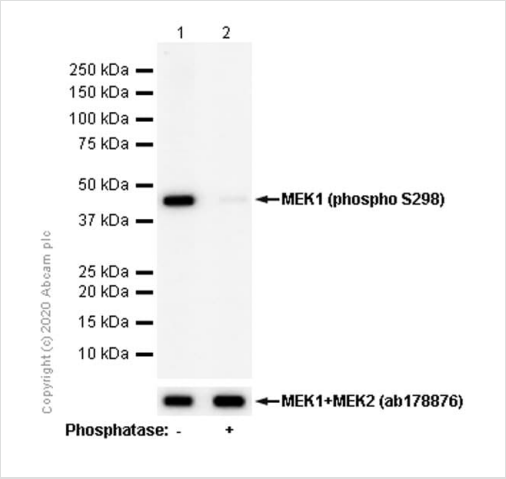
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 43 kDa



Flow Cytometry (Intracellular) - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

This data was developed using **ab96379**, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling MEK1 with Purified **ab96379** at 1/100 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



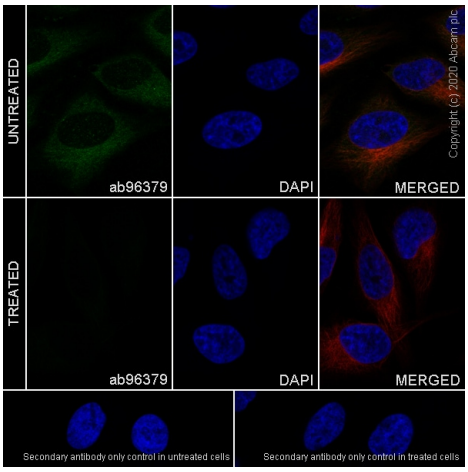
Western blot - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

All lanes : Anti-MEK1 (phospho S298) antibody [EPR3338] (**ab96379**) at 1/1000 dilution (Purified)

Lane 1 : Mouse skeletal muscle lysate
Lane 2 : Mouse skeletal muscle lysate, the membrane treated with phosphatase for 1 hour

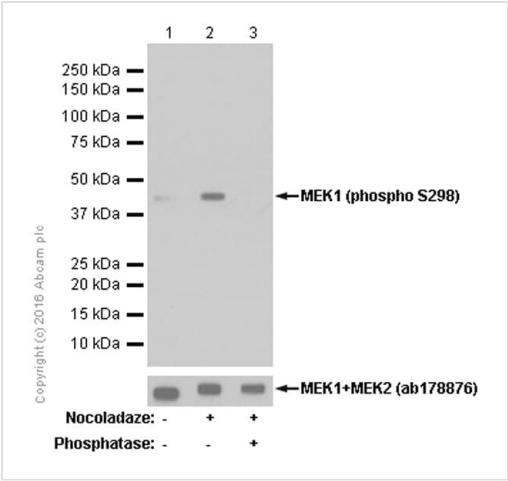
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 43 kDa



Immunocytochemistry/ Immunofluorescence - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

This data was developed using **ab96379**, the same antibody clone in a different buffer formulation.
Immunocytochemistry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) treated with lambda phosphatase cells labeling MEK1 with Purified **ab96379** at 1/100 dilution (9.53 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 dilution (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 dilution (2 µg/mL). DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



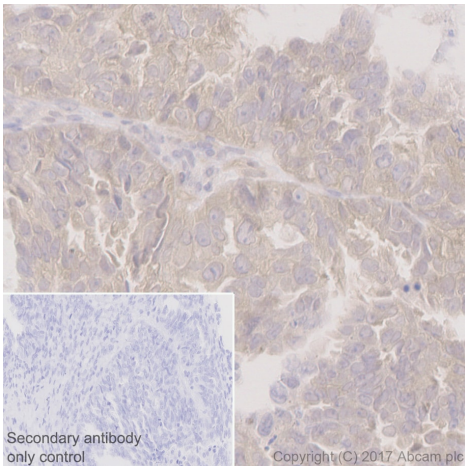
Western blot - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

All lanes : Anti-MEK1 (phospho S298) antibody [EPR3338] (**ab96379**) at 1/1000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) treated with 100 ng/ml nocoladaze for 18 hours whole cell lysate
Lane 3 : HeLa (Human cervix adenocarcinoma epithelial cell) treated with 100ng/ml nocoladaze for 18 hours, then the membrane treated with phosphatase for 1 hour

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 43 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

This data was developed using **ab96379**, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma tissue sections labeling MEK1 with Purified **ab96379** at 1/50 dilution (19.06 µg/mL). Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Anti-MEK1 (phospho S298) antibody [EPR3338] - BSA and Azide free (ab214445)

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