

Anti-MEK7/MAP2K7 Antibody Picoband™

Catalog Number: PB9764

About MAP2K7

MAP2K7 (Mitogen-activated protein kinase kinase 7), also known as MAP kinase kinase 7, MAPKK7, JNKK2, PRKMK7 or MKK7, is an enzyme that in humans is encoded by the MAP2K7 gene. This protein is a member of the mitogen-activated protein kinase kinase family. The MKK7 protein exists as six different isoforms with three possible N-termini (alpha, beta, and gamma isoforms) and two possible C-termini (1 and 2 isoforms). Schramek et al. (2011) showed that the doxorubicin-mediated DNA damage response in human A549 lung carcinoma cells caused rapid phosphorylation and upregulation of p53 (TP53). MKK7 knockdown reduced p53 phosphorylation, delayed p53 upregulation, and interfered with cell cycle arrest at G2/M. MKK7 was activated in primary lung tumors, and tumors with a p53 mutation showed even higher MKK7 phosphorylation. Schramek et al. (2011) concluded that MKK7 exerts its tumor suppressive function through p53.

Overview

Product Name	Anti-MEK7/MAP2K7 Antibody Picoband™
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-MEK7/MAP2K7 Antibody Picoband™ catalog # PB9764. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	O14733

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MEK7, identical to the related mouse and rat sequences.
Predicted Reactive Species	Bovine
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.25ug/ml, Human, Monkey, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 1-2ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry, 1-3 ug/1x10⁶ cells, Human

Anti-MEK7/MAP2K7 Antibody Picoband™ (PB9764) Images

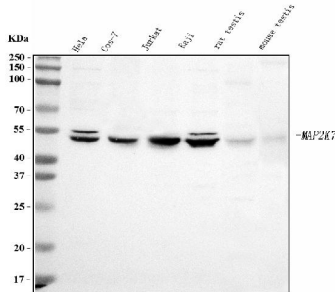


Figure 1. Western blot analysis of MEK7/MAP2K7 using anti-MEK7/MAP2K7 antibody (PB9764).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,
Lane 2: monkey COS-7 whole cell lysates,
Lane 3: human Jurkat whole cell lysates,
Lane 4: human Raji whole cell lysates,
Lane 5: rat testis tissue lysates,
Lane 7: mouse testis tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MEK7/MAP2K7 antigen affinity purified polyclonal antibody (Catalog # PB9764) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MEK7/MAP2K7 at approximately 47 kDa. The expected band size for MEK7/MAP2K7 is at 47 kDa.

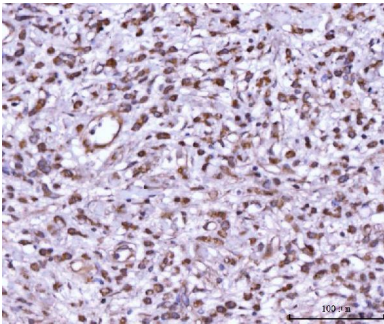


Figure 2. IHC analysis of MEK7/MAP2K7 using anti-MEK7/MAP2K7 antibody (PB9764).

MEK7/MAP2K7 was detected in a paraffin-embedded section of human testicular cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MEK7/MAP2K7 Antibody (PB9764) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

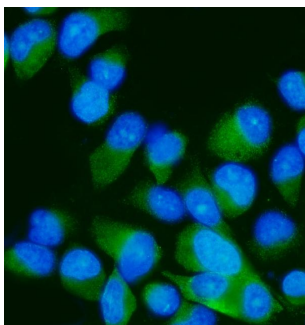


Figure 3. IF analysis of MEK7/MAP2K7 using anti-MEK7/MAP2K7 antibody (PB9764).

MEK7/MAP2K7 was detected in an immunocytochemical section of PC-3 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-MEK7/MAP2K7 Antibody (PB9764) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence

microscope and filter sets appropriate for the label used.

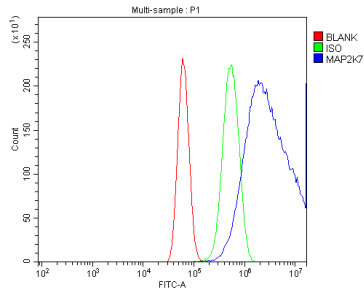


Figure 4. Flow Cytometry analysis of U87 cells using anti-MEK7/MAP2K7 antibody (PB9764).

Overlay histogram showing U87 cells stained with PB9764 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MEK7/MAP2K7 Antibody (PB9764, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight® 488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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