

Anti-MEK7/MAP2K7 Antibody Picoband®

Catalog Number: PA1922

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

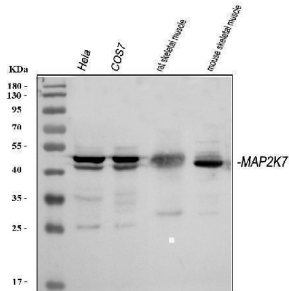
Product Name	Anti-MEK7/MAP2K7 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-MEK7/MAP2K7 Antibody catalog # PA1922. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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

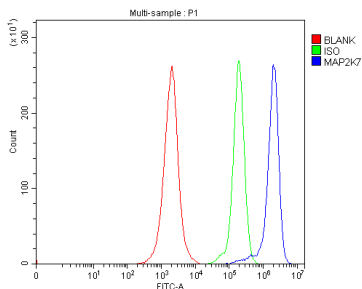
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MEK7, identical to the related rat and mouse sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity 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	Western blot, 0.1-0.5ug/ml, Human, Monkey, Mouse, Rat Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human

Anti-MEK7/MAP2K7 Antibody Picoband® (PA1922) Images



Western blot analysis of MEK7/MAP2K7 using anti-MEK7/MAP2K7 antibody (PA1922). 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: rat skeletal muscle tissue lysates, Lane 4: mouse skeletal muscle 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 # PA1922) at 0.5 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.



Flow Cytometry analysis of Jurkat cells using anti-MEK7/MAP2K7 antibody (PA1922). Overlay histogram showing Jurkat cells stained with PA1922 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MEK7/MAP2K7 Antibody (PA1922, 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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