

Anti-p38 alpha/MAPK14 Antibody Picoband™

Catalog Number: A00176-2

About MAPK14

Mitogen-activated protein kinase 14, also called p38-alpha, is an enzyme that in humans is encoded by the MAPK14 gene. The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is activated by various environmental stresses and proinflammatory cytokines. The activation requires its phosphorylation by MAP kinase kinases (MKKs), or its autophosphorylation triggered by the interaction of MAP3K7IP1/TAB1 protein with this kinase. The substrates of this kinase include transcription regulator ATF2, MEF2C, and MAX, cell cycle regulator CDC25B, and tumor suppressor p53, which suggest the roles of this kinase in stress related transcription and cell cycle regulation, as well as in genotoxic stress response. Four alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Overview

Product Name	Anti-p38 alpha/MAPK14 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-p38 alpha/MAPK14 Antibody Picoband™ catalog # A00176-2. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q16539

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human p38 alpha/MAPK14, identical to the related mouse and rat sequences.
Predicted Reactive Species	Chicken
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 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, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry, 1-3 ug/1x10⁶ cells, Human

Anti-p38 alpha/MAPK14 Antibody Picoband™ (A00176-2) Images

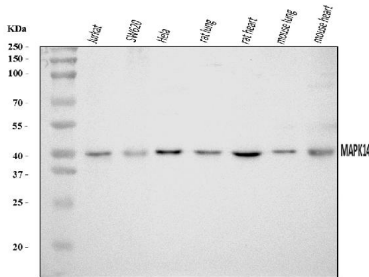


Figure 1. Western blot analysis of P38 Alpha/MAPK14 using anti-P38 Alpha/MAPK14 antibody (A00176-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Jurkat whole cell lysates,
Lane 2: human SW620 whole cell lysates,
Lane 3: human Hela whole cell lysates,
Lane 4: rat lung tissue lysates,
Lane 5: rat heart tissue lysates,
Lane 6: mouse lung tissue lysates,
Lane 7: mouse heart 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-P38 Alpha/MAPK14 antigen affinity purified polyclonal antibody (Catalog # A00176-2) 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 P38 Alpha/MAPK14 at approximately 41 kDa. The expected band size for P38 Alpha/MAPK14 is at 41 kDa.

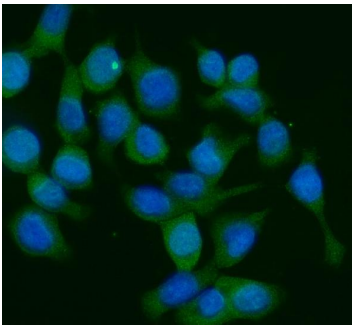


Figure 2. IF analysis of P38 Alpha/MAPK14 using anti-P38 Alpha/MAPK14 antibody (A00176-2).

P38 Alpha/MAPK14 was detected in an immunocytochemical section of Caco-2 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-P38 Alpha/MAPK14 Antibody (A00176-2) 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.

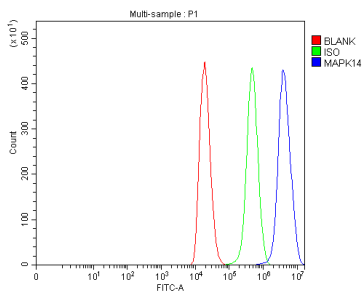


Figure 3. Flow Cytometry analysis of 293T cells using anti-P38 Alpha/MAPK14 antibody (A00176-2).

Overlay histogram showing 293T cells stained with A00176-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-P38 Alpha/MAPK14 Antibody (A00176-2, 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.

4 Publications Citing This Product

1. PubMed ID: 10.1016/j.ijbiomac.2017.05.191, beta-d-glucan from Antrodia Camphorata ameliorates LPS-induced inflammation and ROS production in human hepatocytes
2. PubMed ID: 10.1016/j.jep.2017.03.012, The vascular protective effects of Anoectochilus roxburghii polysaccharose under high glucose conditions
3. PubMed ID: 10.1007/s12031-017-0994-x, Let-7d microRNA Attenuates 6-OHDA-Induced Injury by Targeting Caspase-3 in MN9D Cells

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