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Anti-SAPK4/MAPK13 Antibody Picoband®

Catalog Number: PB9721

About MAPK13

MAPK13 (Mitogen-Activated Protein Kinase 13), also called p38-DELTA or Stress-Activated Protein Kinase 4 (SAPK4), is an enzyme that in humans is encoded by the MAPK13 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 closely related to p38 MAP kinase, both of which can be activated by proinflammatory cytokines and cellular stress. MAP kinase kinases 3, and 6 can phosphorylate and activate this kinase. Transcription factor ATF2, and microtubule dynamics regulator stathmin have been shown to be the substrates of this kinase.

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Overview

Product Name	Anti-SAPK4/MAPK13 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SAPK4/MAPK13 Antibody Picoband® catalog # PB9721. Tested in Flow Cytometry, IP, ICC/IF, IHC, WB applications. This antibody reacts with Human, 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, IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	O15264

Technical Details

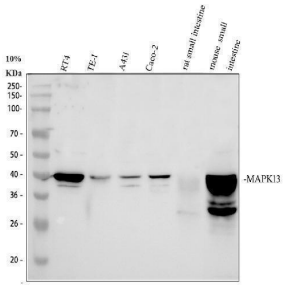
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human SAPK4 , different from the related mouse sequence by two amino acids, and from the related rat sequence by three amino

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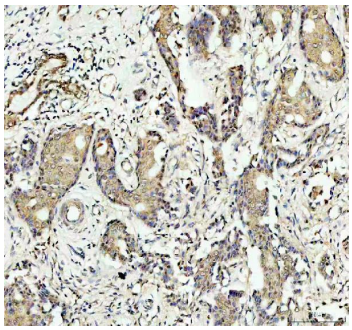
	acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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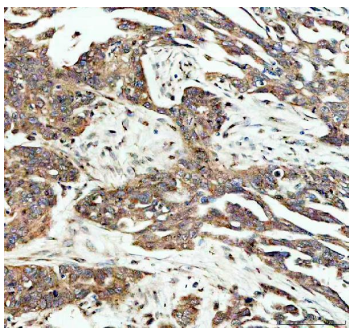
Anti-SAPK4/MAPK13 Antibody Picoband® (PB9721) Images



Western blot analysis of SAPK4 using anti-SAPK4 antibody (PB9721). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human RT4 whole cell lysates, Lane 2: human TE-1 whole cell lysates, Lane 3: human A431 whole cell lysates, Lane 4: human Caco-2 whole cell lysates, Lane 5: rat small intestine tissue lysates, Lane 6: mouse small intestine 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-SAPK4 antigen affinity purified polyclonal antibody (PB9721) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for SAPK4 at approximately 42 kDa. The expected band size for SAPK4 is at 42 kDa.



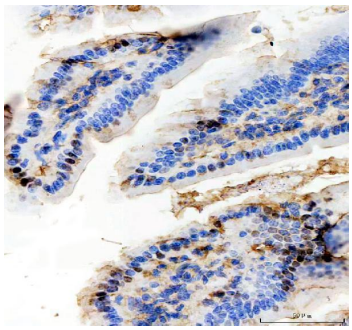
IHC analysis of SAPK4 using anti-SAPK4 antibody (PB9721). SAPK4 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SAPK4 Antibody (PB9721) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



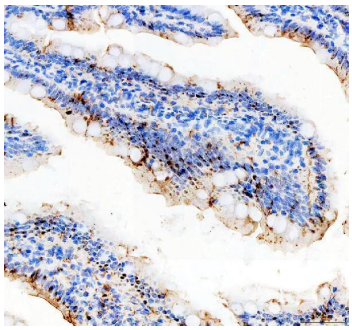
IHC analysis of SAPK4 using anti-SAPK4 antibody (PB9721). SAPK4 was detected in a paraffin-embedded section of human ovary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SAPK4 Antibody (PB9721) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of SAPK4 using anti-SAPK4 antibody (PB9721). SAPK4 was detected in a paraffin-embedded section of

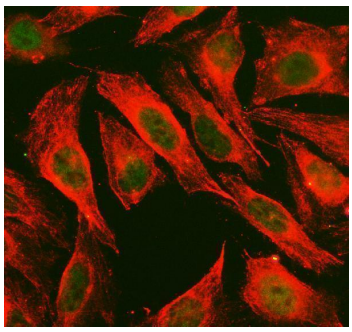
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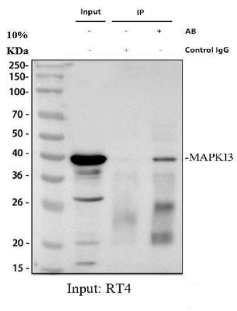
mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SAPK4 Antibody (PB9721) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of SAPK4 using anti-SAPK4 antibody (PB9721). SAPK4 was detected in a paraffin-embedded section of rat colon 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-SAPK4 Antibody (PB9721) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



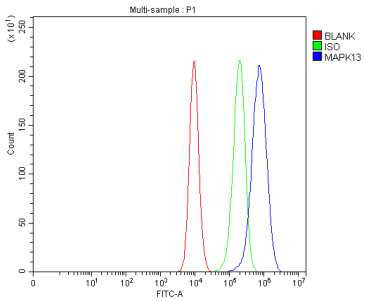
IF analysis of SAPK4 using anti-SAPK4 antibody (PB9721) and anti-Alpha Tubulin antibody (M03989-3). SAPK4 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-SAPK4 Antibody (PB9721) and mouse anti-Alpha Tubulin antibody (M03989-3) overnight at 4°C. Fluoro488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Immunoprecipitating (IP) SAPK4 in RT4 whole cell lysate. Western blot analysis of SAPK4 using anti-SAPK4 antibody (PB9721); Lane 1: RT4 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-SAPK4 antibody in RT4 whole cell lysate; Lane 3: anti-SAPK4 antibody (2ug) + RT4 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-SAPK4 antigen affinity purified polyclonal antibody (PB9721) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Light Chain). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for SAPK4 at approximately 42 kDa. The expected band size for SAPK4 is at 42 kDa.

Flow Cytometry analysis of CACO-2 cells using anti-SAPK4 antibody (PB9721). Overlay histogram showing CACO-2 cells stained with PB9721 (Blue line). To facilitate intracellular

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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-SAPK4 Antibody (PB9721, 1 ug/1x106 cells) for 30 min at 20°C. Fluoro488 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.

Anti-SAPK4/MAPK13 Antibody

For Research Use Only. Not for use in diagnostic procedures.