

Anti-PAK2 Antibody

Catalog Number: A01419-2

Introduction

CD3epsilon is a 20kD chain, which together with CD3lambda, CD3delta, and CD3zeta, and a T cell receptor (alpha/beta or gamma/delta) form the CD3/T-cell receptor complex. It is a specific marker for T lymphocytes, NK T cells, and some thymocytes. Crosslinking of TCR initiates an intracellular signaling cascade resulting in cellular activation and proliferation. The OKT3 antibody has been reported to have potent immunosuppressive properties in vivo and has been proved effective in the treatment of renal, heart, and liver allograft rejection.

This antibody is routinely tested by flow cytometric analysis. Flow cytometry and other applications were tested during antibody development or are reported in the literature.

Application Information

Each lot of this antibody has been quality control tested by flow cytometric analysis of human PBMCs. For flow cytometric staining, the recommended use of this antibody is $\leq 0.5\mu\text{g}$ per 1×10^6 cells in $100\mu\text{l}$ of staining volume followed by a secondary fluorescent conjugated anti-mouse antibody. However, it is strongly suggested that the antibody reactivity be empirically titrated for optimal performance in the application of interest.

About PAK2

The p21-activated kinases (PAKs) are serine-threonine kinases that bind to the active forms of Cdc42 and Rac. They are divided into two groups, the first of which include PAK1, 2 and 3, and can be activated by Cdc42/Rac binding. Group 1 PAKs contain an autoinhibitory domain whose activity is regulated by Cdc42/Rac binding. The group 1 PAKs are known to be involved in cellular processes such as gene transcription, apoptosis, and cell morphology and motility. Much less is known about the second group, which includes PAK4, 5 and 6, and are not activated by Cdc42/Rac binding. Of the six PAK proteins, only PAK2 is ubiquitously expressed and cleaved by caspase-3. This cleavage removes the amino-terminal regulatory domain and generates a constitutively active kinase fragment. Recent experiments have shown that following cleavage, the active fragment is myristoylated and directed to the plasma membrane and membrane ruffles where it promotes cell death via increased signaling through the c-Jun N-terminal kinase pathway, but without compromising mitochondrial integrity.

Overview

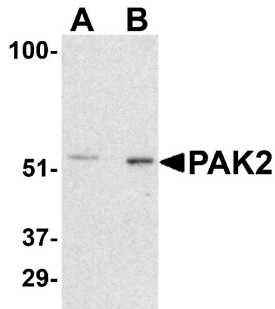
Product Name	Anti-PAK2 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-PAK2 Antibody (Catalog # A01419-2). Tested in ELISA, WB, IHC-P, IF applications. This antibody reacts with Human, Mouse, Rat.
Conjugate	Biotin
Application	ELISA, IF, IHC-P, WB
Clonality	Polyclonal SK7
Formulation	PAK2 Antibody is supplied in PBS containing 0.02% sodium azide.

Storage Instructions	PAK2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q13177

Technical Details

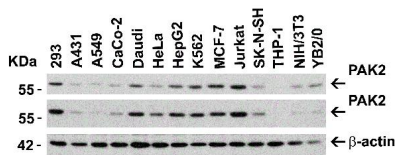
Immunogen	Anti-PAK2 antibody was raised against a peptide corresponding to 14 amino acids near the carboxy terminus of human PAK2. The immunogen is located within amino acids 440-490 of PAK2.
Predicted Reactive Species	Rabbit
Cross Reactivity	TRB3 antibody is human, mouse and rat reactive. At least two isoforms of TRB3 are known to exist; this antibody will detect both isoforms.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL
Purification	PAK2 Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB: 0.5-1 ug/mL; IHC: 10 ug/mL; IF: 20 ug/mL.</p> <p>Antibody validated: Western Blot in human, mouse and rat samples; Immunohistochemistry and Immunofluorescence in mouse samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.</p>

Anti-PAK2 Antibody (A01419-2) Images



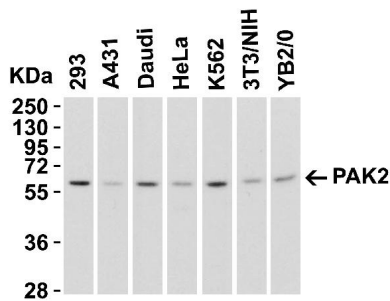
Western Blot Validation in Rat Bladder Tissue Lysate

Loading: 15 ug of lysates per lane. Antibodies: PAK2 A01419-2 (A: 0.5 ug/mL, B: 1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



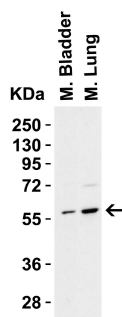
Independent Antibody Validation (IAV) via Protein Expression Profile in Cell Lines

Loading: 15 ug of lysates per lane. Antibodies: PAK2 A01419-2 (1 ug/mL), PAK2 (1 ug/mL) and beta-actin (1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



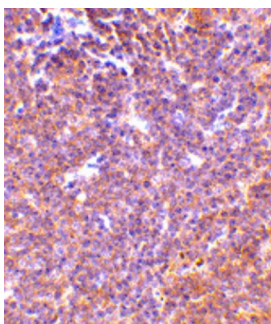
Western Blot Validation in Human, Mouse and Rat Cell Lines

Loading: 15 ug of lysates per lane. Antibodies: PAK2 A01419-2 (1 ug/mL per lane), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



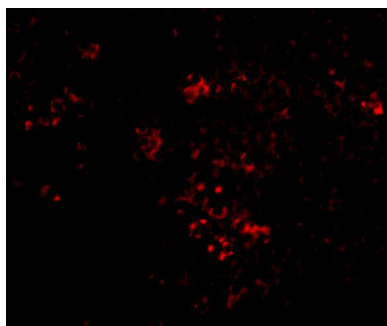
Western Blot Validation in Mouse Tissues

Loading: 15 ug of lysates per lane. Antibodies: PAK2 A01419-2 (1 ug/mL per lane)



Immunohistochemistry Validation of PAK2 in Mouse Spleen Tissue

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue using anti-PAK2 antibody (A01419-2) at 10 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunofluorescence Validation of PAK2 in Mouse Spleen Cells

Immunofluorescent analysis of 4% paraformaldehyde-fixed mouse spleen labeling PAK2 with A01419-2 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red).

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