BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Epac1/RAPGEF3 Antibody Picoband®

Catalog Number: A02483-3

About RAPGEF3

Rap guanine nucleotide exchange factor 3 also known as exchange factor directly activated by cAMP 1 (EPAC1) or cAMP-regulated guanine nucleotide exchange factor I (cAMP-GEFI) is a protein that in humans is encoded by the RAPGEF3 gene. As the name suggests, EPAC proteins (EPAC1 and EPAC2) are a family of intracellular sensors for cAMP, and function as nucleotide exchange factors for the Rap subfamily of RAS-like small GTPases.

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Overview

Product Name	Anti-Epac1/RAPGEF3 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse
Description	Boster Bio Anti-Epac1/RAPGEF3 Antibody Picoband® catalog # A02483-3. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Monkey. 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	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
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	O95398

Technical Details

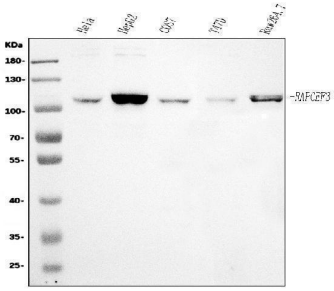
Immunogen	E.coli-derived human Epac1/RAPGEF3 recombinant protein (Position: H49-R881).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.

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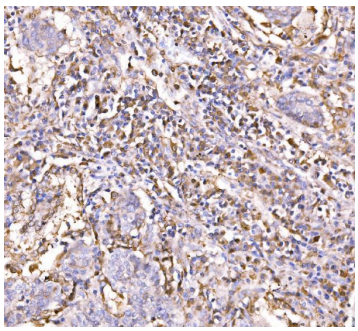
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Monkey Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human ELISA, 0.1-0.5 ug/ml, - 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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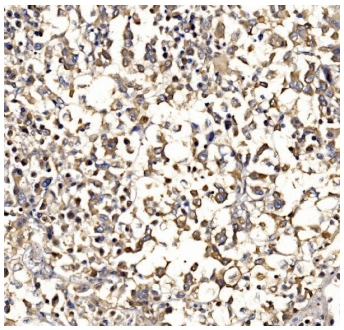
Anti-Epac1/RAPGEF3 Antibody Picoband® (A02483-3) Images



Western blot analysis of Epac1/RAPGEF3 using anti-Epac1/RAPGEF3 antibody (A02483-3). 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: human HepG2 whole cell lysates, Lane 3: monkey COS7 whole cell lysates, Lane 4: human T-47D whole cell lysates, Lane 5: mouse RAW264.7 whole cell 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-Epac1/RAPGEF3 antigen affinity purified polyclonal antibody (Catalog # A02483-3) 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 Epac1/RAPGEF3 at approximately 104 kDa. The expected band size for Epac1/RAPGEF3 is at 104 kDa.



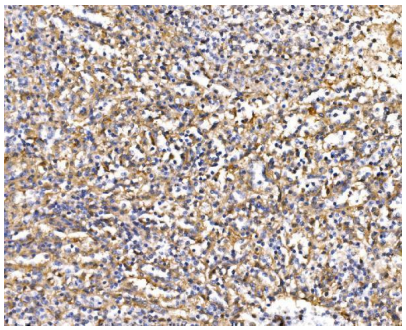
IHC analysis of Epac1/RAPGEF3 using anti-Epac1/RAPGEF3 antibody (A02483-3). Epac1/RAPGEF3 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Epac1/RAPGEF3 Antibody (A02483-3) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



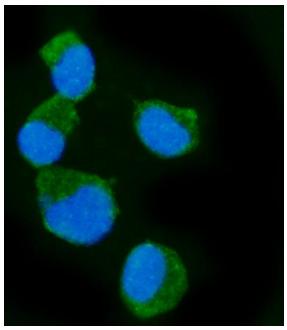
IHC analysis of Epac1/RAPGEF3 using anti-Epac1/RAPGEF3 antibody (A02483-3). Epac1/RAPGEF3 was detected in a paraffin-embedded section of human pancreatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Epac1/RAPGEF3 Antibody (A02483-3) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of Epac1/RAPGEF3 using anti-Epac1/RAPGEF3

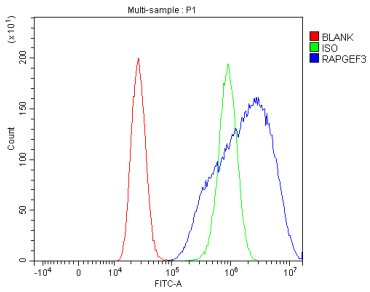
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antibody (A02483-3). Epac1/RAPGEF3 was detected in a paraffin-embedded section of human rupture of spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Epac1/RAPGEF3 Antibody (A02483-3) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of Epac1/RAPGEF3 using anti-Epac1/RAPGEF3 antibody (A02483-3). Epac1/RAPGEF3 was detected in an immunocytochemical section of T-47D 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-Epac1/RAPGEF3 Antibody (A02483-3) 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.



Flow Cytometry analysis of MCF-7 cells using anti-Epac1/RAPGEF3 antibody (A02483-3). Overlay histogram showing MCF-7 cells stained with A02483-3 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-Epac1/RAPGEF3 Antibody (A02483-3, 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.

Anti-Epac1/RAPGEF3 Antibody

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