10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2)

Catalog # ABO14868

Specification

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Product Information

Application	**WB, IHC, IF, ICC, FC**
Primary Accession	Q16611
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Additional Information

Gene ID 578

Other Names
Bcl-2 homologous antagonist/killer, Apoptosis regulator BAK, Bcl-2-like protein 7, Bcl2-L-7, BAK1, BAK, BCL2L7, CDN1

Calculated MW
23-25 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml
 Immunocytochemistry/Immunofluorescence, 2 µg/ml
 Flow Cytometry, 1-3 µg/1x10^6 cells

Subcellular Localization
Mitochondrion outer membrane. Single-pass membrane protein.

Tissue Specificity
Expressed in a wide variety of tissues, with highest levels in the heart and skeletal muscle.

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen
E.coli-derived human BAK/BAK1 recombinant protein (Position: A22-S211). Human BAK shares 78.3 % amino acid (aa) sequence identity with mouse BAK.

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Cross Reactivity
No cross-reactivity with other proteins.

Storage

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.

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Protein Information

Name BAK1

Synonyms BAK, BCL2L7, CDN1

Function
Plays a role in the mitochondrial apoptotic process. Upon arrival of cell death signals, promotes mitochondrial outer membrane (MOM) permeabilization by oligomerizing to form pores within the MOM. This releases apoptogenic factors into the cytosol, including cytochrome c, promoting the activation of caspase 9 which in turn processes and activates the effector caspases.

Cellular Location
Mitochondrion outer membrane; Single-pass membrane protein

Tissue Location
Expressed in a wide variety of tissues, with highest levels in the heart and skeletal muscle

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Images

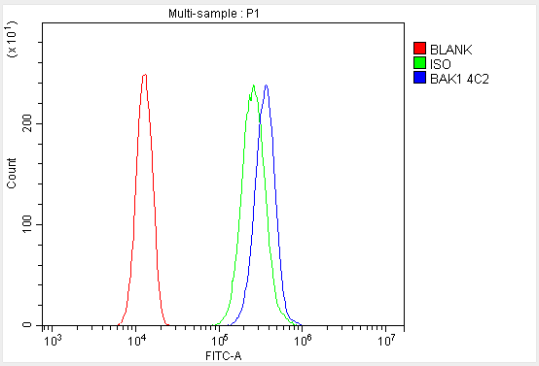

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Figure 10. Flow Cytometry analysis of SiHa cells using anti-BAK1 antibody (M01163-1).
Overlay histogram showing SiHa cells stained with M01163-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-BAK1 Antibody (M01163-1,1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

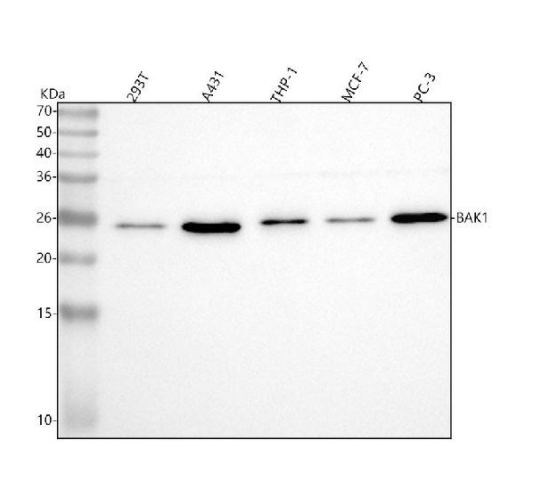

Figure 1. Western blot analysis of BAK/BAK1 using anti-BAK/BAK1 antibody (M01163-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human 293T whole cell lysates,
Lane 2: human A431 whole cell lysates,
Lane 3: human THP-1 whole cell lysates,
Lane 4: human MCF-7 whole cell lysates,
Lane 5: human PC-3 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 mouse anti-BAK/BAK1 antigen affinity purified monoclonal antibody (Catalog # M01163-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for BAK/BAK1 at approximately 25 kDa. The expected band size for BAK/BAK1 is at 23 kDa.

Anti-BAK/BAK1 Antibody Picoband™ (monoclonal, 4C2) - Background

BAK, officially called Bcl2 antagonist killer, is a protein that in humans, encoded by the BAK gene. The BAK protein is a pro-apoptotic member of the Bcl-2 gene family which is involved in initiating apoptosis. BAK gene spans 7.6 kb and contains 6 exons. By Southern blot analysis of genomic DNA from human/rodent somatic cell hybrids, BAK gene is localized to chromosome 6. This protein localizes to mitochondria, and functions to induce apoptosis. It interacts with and accelerates the opening of the mitochondrial voltage-dependent anion channel, which leads to a loss in membrane potential and the release of cytochrome. This protein also interacts with the tumor suppressor P53 after exposure to cell stress.