abcam

ab3191

Anti-Bax antibody [5B7]

Recombinant

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	5B7
Purification technique	Affinity purification Protein A
Specificity	Antibody raised against a synthetic peptide that is not shared by rat or human Bax.
Light chain type	kappa
Concentration	0.893 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse

Dilution info	13.9 µg/mL
Notes	-

WB

Tested

Species	Mouse
Dilution info	0.417 µg/mL
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1.043 µg/mL
Notes	-

Target data

See full target information Bax

Function	Accelerates programmed cell death by binding to, and antagonizing the apoptosis repressor BCL2 or its adenovirus homolog E1B 19k protein. Under stress conditions, undergoes a conformation change that causes translocation to the mitochondrion membrane, leading to the release of cytochrome c that then triggers apoptosis. Promotes activation of CASP3, and thereby apoptosis. BAX deficiency leads to lymphoid hyperplasia and male sterility, because of the cessation of sperm production.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Bax also known as Bcl-2-associated X protein plays an important role in the regulation of apoptosis. It is widely known for its pro-apoptotic function opposing the action of anti-apoptotic proteins like Bcl-2. Bax has a molecular weight of approximately 21 kDa making it identifiable in laboratory techniques such as western blot. Researchers often use anti-Bax antibodies to detect and analyze its expression levels in various studies. The Bax protein is mainly expressed in mitochondria where it undergoes changes in response to apoptotic signals.
Biological function summary	The Bax protein forms homodimers or heterodimers with other Bcl-2 family proteins to facilitate apoptosis. This protein is part of a larger complex involving several members of the Bcl-2 family which finely tunes the balance between cell survival and programmed cell death. Through a change in its conformation Bax translocates to the outer mitochondrial membrane where it promotes the release of cytochrome c and other apoptogenic factors into the cytosol.
Pathways	Bax plays a significant role in the intrinsic pathway of apoptosis also known as the mitochondrial pathway. This pathway involves the release of cytochrome c which further activates downstream proteins such as caspase-9 and caspase-3. Bax interacts closely with proteins like Bak another pro-apoptotic member of the Bcl-2 family providing a cooperative function in mitochondrial membrane permeabilization. Together Bax and Bak act as gatekeepers of the mitochondrial pathway determining the cell's fate in response to apoptotic stimuli.

Associated diseases and disorders	The dysregulation of Bax often associates with various cancers and neurodegenerative diseases. In cancer reduced Bax expression or function can lead to resistance to apoptosis contributing to unchecked cellular proliferation. Conversely in neurodegenerative disorders such as Alzheimer's disease increased Bax activity results in excessive neuronal apoptosis. The balance between Bax and its partner proteins like Bcl-2 or Bcl-xL is important in maintaining normal cellular function and preventing disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

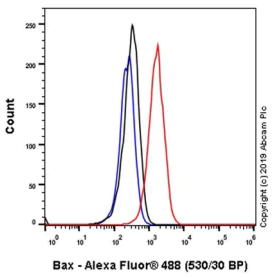
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images

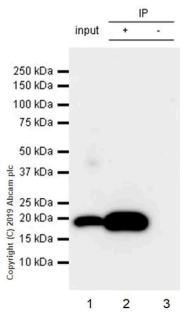


Flow Cytometry (Intracellular) - Anti-Bax antibody [5B7] (ab3191)

Bax Flow Cytometry (Intracellular) staining using mouse Anti-Bax antibody

Intracellular flow cytometry analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) cells labeling Bax with ab3191 at a 1.043µg/ml (red) compared to a mouse monoclonal IgG isotype control (black) and cells without incubation with primary antibody and secondary antibody (blue). Goat anti-mouse IgG (Alexa Fluor® 488, ab150113) was used as the secondary at a 1/2000 dilution.

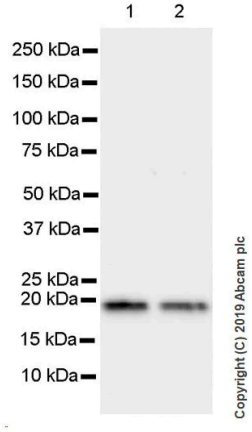
Immunoprecipitation - Anti-Bax antibody [5B7] (ab3191)



Bax was immunoprecipitated from RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate with ab190908 at 13.9µg/ml. Western blot was performed from the immunoprecipitate using ab3191 at 1/1000 dilution. Anti-mouse IgG for IP (HRP) (ab131368) was used as secondary antibody at 1/50000 dilution.
Lane 1: RAW 264.7 whole cell lysate 10ug (Input).
Lane 2: ab3191 IP in RAW 264.7 whole cell lysate.
Lane 3: Mouse monoclonal IgG instead of ab3191 in RAW 264.7 whole cell lysate.
Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: 30 seconds.
All lanes:
Immunoprecipitation - Anti-Bax antibody [5B7] (ab3191)

Predicted band size: 21 kDa

Western blot - Anti-Bax antibody [5B7] (ab3191)



Bax Western blot staining using mouse Anti-Bax antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Lane 1:
Western blot - Anti-Bax antibody [5B7] (ab3191) at 0.417 mg/mL

Lane 2:
Western blot - Anti-Bax antibody [5B7] (ab3191) at 0.417 µg/mL

Lane 1:
A20 (Mouse reticulum sarcoma B lymphocyte) lysate at 20 µg

Lane 2:
C2C12 (Mouse myoblasts) lysate at 20 µg

Predicted band size: 21 kDa

Exposure time: 26s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.