abcam

ab32158

Anti-Bim antibody [Y36]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	Y36
Purification technique	Affinity purification Protein A
Specificity	Based on the sequence homology of the immunogen, this antibody is likely to detect all Bim isoforms.
Concentration	0.554 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40 - 1/50

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/500 - 1/2000
Notes	-

Species	Rat
Dilution info	1/500 - 1/2000
Notes	-

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100 - 1/250
Notes	-

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. **Mouse and Rat species are recommended based on WB results, we do not guarantee IHC-P for Mouse and Rat.** Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information BCL2L11

Function	Induces apoptosis and anoikis. Isoform BimL is more potent than isoform BimEL. Isoform Bim-alpha1, isoform Bim-alpha2 and isoform Bim-alpha3 induce apoptosis, although less potent than isoform BimEL, isoform BimL and isoform BimS. Isoform Bim-gamma induces apoptosis. Isoform Bim-alpha3 induces apoptosis possibly through a caspase-mediated pathway. Isoform BimAC and isoform BimABC lack the ability to induce apoptosis.

Storage

Shipped at conditions	Conditional Ambient
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

Mouse and Rat species are recommended based on WB results, we do not guarantee IHC-P for Mouse and Rat.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Supplementary info

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

Activity summary	Bim also known as Bcl-2-interacting mediator of cell death is an important pro-apoptotic protein within the Bcl-2 family. It has a molecular weight of approximately 23 kDa. Bim is expressed in various tissues including the immune system nervous system and lymphoid tissues. It exists in multiple isoforms such as BimEL BimL and BimS due to alternative splicing. Bim's interaction with cellular membranes allows it to regulate apoptotic processes through mitochondrial pathways effectively.
Biological function summary	Bim regulates apoptosis by binding to pro-survival proteins like Bcl-2 and Bcl-xL releasing pro-apoptotic factors from mitochondria and activating caspases. Bim acts as part of the apoptosome complex and influences cell death regulation significantly. By promoting cytochrome c release from mitochondria Bim initiates a cascade of events leading to cell apoptosis. This regulation is vital in maintaining the balance between cell survival and death necessary for normal development and tissue homeostasis.
Pathways	Bim plays a critical role in the intrinsic apoptotic pathway. This pathway involves mitochondrial outer membrane permeabilization where Bim interacts with several Bcl-2 family proteins such as Bax and Bak to induce apoptosis. The modulation of Bim expression and activity is influenced by growth factor signaling pathways such as the PI3K-Akt pathway which affects Bim phosphorylation leading to its inactivation and subsequent degradation. Therefore Bim acts as an important node linking survival signals and apoptotic machinery.
Associated diseases and disorders	Bim dysregulation has been implicated in conditions like cancer and autoimmune diseases. In certain cancers reduced Bim expression can result in unchecked cell proliferation and resistance to apoptosis. Conversely in autoimmune disorders overactivity of Bim may lead to excessive immune cell apoptosis contributing to disease pathogenesis. Bim's interactions with proteins like Bcl-2 and Bcl-xL are significant in cancer therapy as targeting these interactions can help overcome resistance to apoptosis in cancer cells improving treatment outcomes.

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

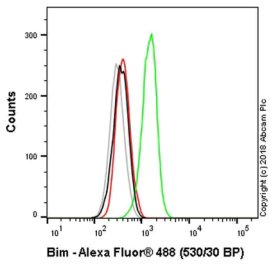
We do not recommend this combination. It is not covered by our product promise.

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.

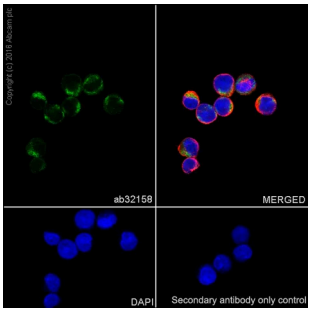
11 product images



Flow Cytometry (Intracellular) - Anti-Bim antibody [Y36] (ab32158)

Bim Flow Cytometry (Intracellular) staining using rabbit Anti-Bim antibody

Overlay histogram showing HAP1 wildtype (green line) and HAP1-BCL2L11 knockout cells (red line) stained with ab32158. The cells were fixed 80% methanol (5 min), and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab32158, 1µg/ml) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) presorbed (ab150081) at 1/2000 dilution for 30 min at 22°C. A rabbit IgG1 isotype control antibody (ab172730) was used at the same concentration and conditions as the primary antibody (HAP1 wildtype - black line, HAP1-BCL2L11 knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity). Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.

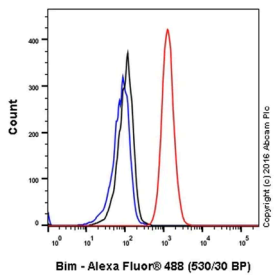


Immunocytochemistry/ Immunofluorescence - Anti-Bim antibody [Y36] (ab32158)

Bim Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Bim antibody

Immunocytochemistry/Immunofluorescence analysis of Raji (Human Burkitt's lymphoma cell line) labeling Bim with ab32158 at a dilution of 1/250. Cells were fixed with 100% methanol. ab150077 (1/1000) was used as the secondary antibody. Cells were co-stained with ab7291, a mouse anti-tubulin antibody (1/200) using ab150120 as the secondary. Nuclei were counterstained with DAPI (blue).
Secondary antibody only control, cells without incubation with the primary antibody was used as negative control.

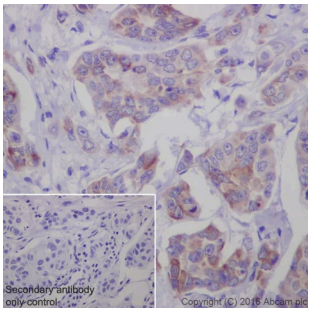
Confocal image showing cytoplasmic staining on Raji cell line



Flow Cytometry (Intracellular) - Anti-Bim antibody [Y36] (ab32158)

Bim Flow Cytometry (Intracellular) staining using rabbit Anti-Bim antibody

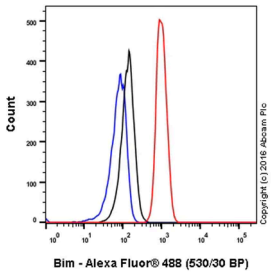
Intracellular Flow Cytometry analysis of Raji (human Burkitt's lymphoma) whole cell lysate labeling Bim with ab32158 at 1/100 (red). Cells were fixed with 4% paraformaldehyde. An Alexa Fluorr® 488)-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG (ab172730). Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bim antibody [Y36] (ab32158)

Bim Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bim antibody

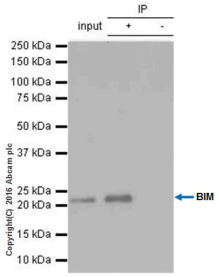
ab32158 staining Bim in human breast cancer tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Antigen retrieval was by heat mediated antigen retrieval using Tris/EDTA Buffer, PH9 (ab93684). Samples were incubated with primary antibody (1/100 in blocking buffer) and a Biotin-conjugated Donkey anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody. Cytoplasmic staining can be seen in the human breast cancer cells. Hematoxylin was used as a counter stain.



Flow Cytometry (Intracellular) - Anti-Bim antibody [Y36] (ab32158)

Bim Flow Cytometry (Intracellular) staining using rabbit Anti-Bim antibody

Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) cells labelling Bim with ab32158 at 1/50 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. An Alexa Fluorr®488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunoprecipitation - Anti-Bim antibody [Y36] (ab32158)

ab32158 at 1/50 immunoprecipitating Bim in Raji (human Burkitt's lymphoma) whole cell lysate.
Lane 1 (input): Raji whole cell lysate (10µg)

Lane 2 (+): ab32158 + Raji whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab32158 in Raji whole cell lysate.

For western blotting, ab32158 (1/1000) was used as the primary antibody and ab131366 VeriBlot for IP Detection Reagent (HRP) was used for detection (1/10 000).

Blocking buffer and concentration: 5% NFDM/TBST.

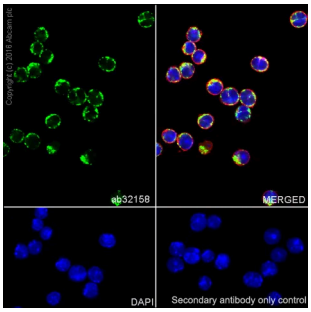
Diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Immunoprecipitation - Anti-Bim antibody [Y36] (ab32158)

Predicted band size: 22 kDa

Observed band size: 22 kDa

Exposure time: 3min

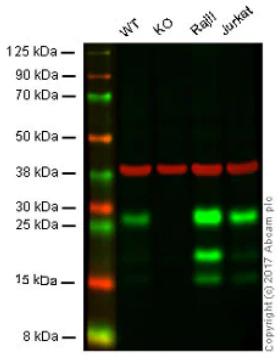


Immunocytochemistry/ Immunofluorescence - Anti-Bim antibody [Y36] (ab32158)

Bim Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Bim antibody

Immunocytochemistry/Immunofluorescence analysis of A20 (Mouse reticulum sarcoma cell line) labeling Bim with ab32158 at a dilution of 1/250. Cells were fixed with 100% methanol. ab150077 (1/1000) was used as the secondary antibody. Cells were co-stained with ab7291, a mouse anti-tubulin antibody (1/200) using ab150120 as the secondary. Nuclei were counterstained with DAPI (blue).
Secondary antibody only control, cells without incubation with the primary antibody was used as negative control.

Confocal image showing cytoplasmic staining on A20 cell line



Western blot - Anti-Bim antibody [Y36] (ab32158)

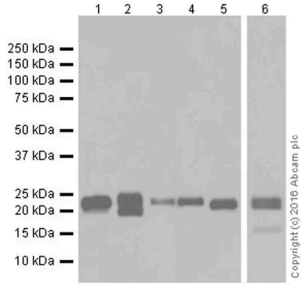
Bim Western blot staining using rabbit Anti-Bim antibody

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: Bim knockout HAP1 whole cell lysate (20 µg)
Lane 3: Raji whole cell lysate (20 µg)
Lane 4: Jurkat whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab32158 observed at 25 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab32158 was shown to specifically react with Bim when Bim knockout samples were used. Wild-type and Bim knockout samples were subjected to SDS-PAGE. ab32158 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/500 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Bim antibody [Y36] (ab32158)

Predicted band size: 22 kDa



Western blot - Anti-Bim antibody [Y36] (ab32158)

Observed band size : 22, 18 kDa
Exposure time : Lane 1- 5: 3 minutes; Lane 6: 2 seconds

Blocking/Diluting buffer and concentration : 5% NFDM /TBST

The observed molecular weight is consistent with the literature (PMID: 24872388)

All lanes:
Western blot - Anti-Bim antibody [Y36] (ab32158) at 1/2000 dilution

Lane 1:
Raji (human Burkitt's lymphoma) whole cell lysate at 20 µg

Lane 2:
A431 (human epidermoid carcinoma) whole cell lysate at 20 µg

Lane 3:

Molt-4 (human acute lymphoblastic leukemia) whole cell lysate at 20 µg

Lane 4:
Human thymus tissue lysate at 20 µg

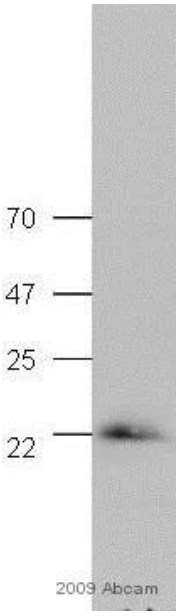
Lane 5:
Mouse thymus tissue lysate at 20 µg

Lane 6:
A20 (mouse reticulum cell sarcoma) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 22 kDa



This image is courtesy of an anonymous customer review.

Western blot - Anti-Bim antibody [Y36] (ab32158)

Primary diluted in PBS (5% BSA + 0.1% tween20) and incubated with sample for 1 hour and 30 minutes at 20°C.
All lanes:
Western blot - Anti-Bim antibody [Y36] (ab32158) at 1/500 dilution

All lanes:
Whole cell lysates prepared from human jurkat cells at 200000 Cells

Secondary

All lanes:
HRP conjugated Donkey polyclonal to rabbit IgG at 1/2000 dilution

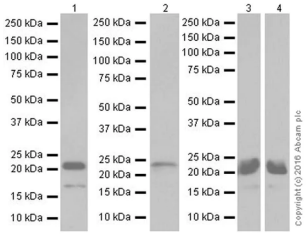
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 22 kDa

Observed band size: 22 kDa

Exposure time: 30s



Western blot - Anti-Bim antibody [Y36] (ab32158)

Observed band size : 22, 18 kDa
Exposure time : Lane 1-3: 3 minutes; Lane 4: 10 seconds

Blocking/Diluting buffer and concentration : 5% NFDM /TBST

The observed molecular weight is consistent with the literature (PMID: 24872388)

All lanes:
Western blot - Anti-Bim antibody [Y36] (ab32158) at 1/2000 dilution

Lane 1:
Mouse spleen tissue lysate at 10 µg

Lane 2:

Rat spleen tissue lysate at 10 µg

Lane 3:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 4:
Raw264.7 (mouse abelson murine leukemia virus-induced tumor) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 22 kDa

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