

Anti-Bcl-2 antibody [EPR17509]

Anti-Bcl-2 antibody [EPR17509] (ab182858) is a rabbit monoclonal antibody detecting Bcl-2 in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 630 publications

Recombinant

RabMAb

KO Validated

20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17509
Purification technique	Affinity purification Protein A
Concentration	1.294 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/500
Notes	

Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

[See full target information BCL2](#) 

Function	Suppresses apoptosis in a variety of cell systems including factor-dependent lymphohematopoietic and neural cells (PubMed:1508712, PubMed:8183370). Regulates cell death by controlling the mitochondrial membrane permeability (PubMed:11368354). Appears to function in a feedback loop system with caspases (PubMed:11368354). Inhibits caspase activity either by preventing the release of cytochrome c from the mitochondria and/or by binding to the apoptosis-activating factor (APAF-1) (PubMed:11368354). Also acts as an inhibitor of autophagy: interacts with BECN1 and AMBRA1 during non-starvation conditions and inhibits their autophagy function (PubMed:18570871, PubMed:20889974, PubMed:21358617). May attenuate inflammation by impairing NLRP1-inflammasome activation, hence CASP1 activation and IL1B release (PubMed:17418785).
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Storage

Shipped at conditions	Conditional Ambient
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

Anti-Bcl-2 antibody [EPR17509] (ab182858) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), IHC-P and WB.

Anti-Bcl-2 antibody [EPR17509] (ab182858) was first used in a scientific publication in 2016 and has been cited over 632 times in peer reviewed journals. Its performance in Western Blot in human and mouse samples is trusted by the scientific community.

Abcam's high quality manufacturing and validation processes ensure Anti-Bcl-2 antibody [EPR17509] (ab182858) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

The specificity of Anti-Bcl-2 antibody [EPR17509] (ab182858) has been confirmed by Western Blot testing in Bcl-2 knockout HeLa cells (ab263752).

Anti-Bcl-2 antibody [EPR17509] (ab182858) has 13 independent reviews from customers.

Anti-Bcl-2 antibody [EPR17509] (ab182858) specifically detects Bcl-2 (UniProt ID: P10415; Molecular weight: 27kDa) and is sold in 100 µL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR17509 - ab219608.

Antibody clone EPR17509 is also available pre-conjugated to a variety of labels for your convenience - HRP (ab209039).

B-cell lymphoma 2 (Bcl-2) is a key protein in oncology, known for its role in regulating apoptosis, or programmed cell death. It promotes cell survival by inhibiting pro-apoptotic proteins, thereby preventing apoptosis and contributing to the development and progression of various cancers.

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

Bcl-2 also known as B-cell lymphoma 2 is an important protein involved in the regulation of apoptosis. It mechanically functions by inhibiting cell death and is a member of the Bcl-2 family of proteins. Bcl-2 has a molecular weight of approximately 26 kDa. It is expressed mainly in fetal and adult tissues including the immune system and is notably present in hematopoietic stem cells and various cell lines derived from lymphoid tissues. In laboratory practices scientists often

assess Bcl-2 expression levels through techniques like western blotting using antibodies such as 10c4 for detection.

Biological function summary

The role of Bcl-2 extends to maintaining cell survival and balancing apoptotic signals. It functions as an anti-apoptotic molecule within the cell primarily involved in forming complexes with pro-apoptotic members of the Bcl-2 family like Bax and Bak. These interactions prevent mitochondrial membrane permeabilization which is an important step in apoptotic signal transduction. As an important regulator of apoptosis Bcl-2 helps in cellular homeostasis and appropriate immune responses under physiological conditions.

Pathways

Bcl-2 plays a critical role in the intrinsic or mitochondrial pathway of apoptosis. Within this pathway Bcl-2 interacts with other proteins such as cytochrome c and APAF-1 to inhibit apoptosis. This pathway involves a network of Bcl-2 family proteins where Bcl-2's anti-apoptotic role counteracts the pro-apoptotic activity of proteins like Bax. These interactions help fine-tune the apoptotic response to various internal stimuli maintaining cellular integrity and function.

Associated diseases and disorders

The dysregulation of Bcl-2 expression has been implicated in cancer and autoimmune diseases. Overexpression of Bcl-2 is associated with several types of cancer including lymphomas and breast cancer where its anti-apoptotic property leads to tumor cell survival and resistance to chemotherapy. Bcl-2 also connects to disorders such as autoimmune diseases due to its regulation of cell survival with proteins like Bim playing an opposite role in promoting apoptosis. Understanding Bcl-2's functionality within these contexts is essential for developing targeted therapies.

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.

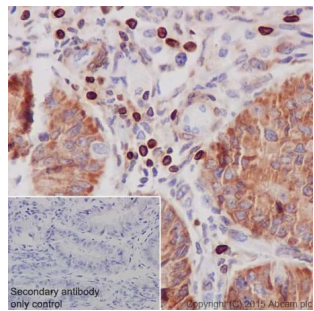
Not recommended

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.

12 product images



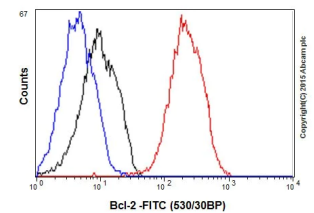
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bcl-2 antibody

Immunohistochemical analysis of paraffin-embedded Human endometrial cancer tissue labeling Bcl-2 with ab182858 at 1/1000 followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500. Cytoplasm, nuclear membrane and nucleus staining on lymphocytes and cancer cells of Human endometrial cancer tissue is observed.

Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody followed by ab97051 at 1/500.

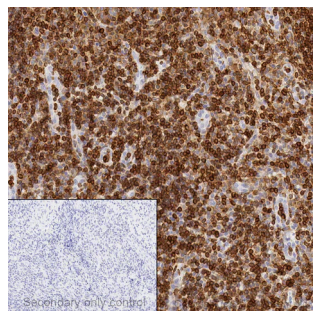
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Bcl-2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling Bcl-2 with ab182858 at 1/250 (red) compared with a rabbit monoclonal IgG isotype control (ab172730) (black) and a unlabelled control (cells without incubation with primary antibody and secondary antibody (blue)). Goat anti rabbit IgG (FITC) at 1/500 was used as the secondary antibody.

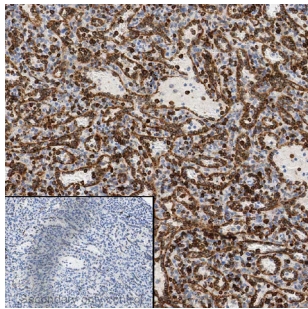


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Immunohistochemical analysis of formalin fixed paraffin embedded human spleen labelling Bcl-2 with ab182858 at a concentration of 0.32µg/ml. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with a Bond™ Polymer Refine Detection kit. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20mins.

ab182858 anti-Bcl-2 antibody [EPR17509] was incubated for 15mins at room temperature. Sections were counterstained with Hematoxylin. Image inset shows absence of staining in secondary antibody only control.

Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)

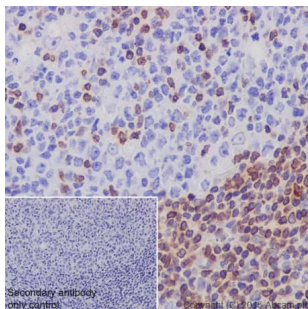


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Immunohistochemical analysis of formalin fixed paraffin embedded human spleen labelling Bcl-2 with ab182858 at a concentration of 0.86µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 32mins.

ab182858 anti-Bcl-2 antibody [EPR17509] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bcl-2 antibody

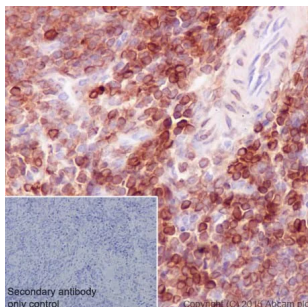
Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling Bcl-2 with ab182858 at 1/1000 followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500.

Cytoplasm, nuclear membrane and nucleus staining on lymphocytes of Human tonsil tissue is observed.

Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody followed by [ab97051](#) at 1/500.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bcl-2 antibody

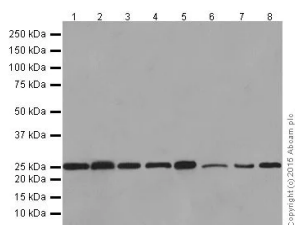
Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling Bcl-2 with ab182858 at 1/1000 followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500.

Cytoplasm, nuclear membrane and nucleus staining on lymphocytes of Mouse spleen tissue is observed.

Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody followed by [ab97051](#) at 1/500.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Western blot staining using rabbit Anti-Bcl-2 antibody

Blocking and diluting buffer was 5% NFDM /TBST.

All lanes:

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858) at 1/20000 dilution

Lane 1:

Human tonsil lysate at 20 µg

Lane 2:

Human thymus lysate at 20 µg

Lane 3:

Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

Lane 4:

U-937 (Human histiocytic lymphoma cells) whole cell lysate at 20 µg

Lane 5:

THP-1 (Human monocytic leukemia cells) whole cell lysate at 20 µg

Lane 6:

HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 7:

C2C12 (Mouse myoblast cell line) whole cell lysate at 20 µg

Lane 8:

WEHI-3 (Mouse leukemia cell line) whole cell lysate at 20 µg

Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/1000 dilution

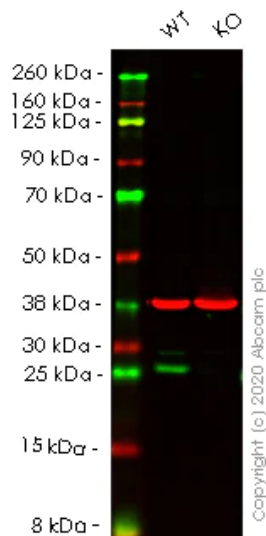
Developed using the ECL technique.

Predicted band size: 26 kDa

Observed band size: 26 kDa

Exposure time: 1min

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)



Bcl-2 Western blot staining using rabbit Anti-Bcl-2 antibody

Lanes 1- 2: Merged signal (red and green). Green - ab182858 observed at 26 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.

ab182858 was shown to react with Bcl-2 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line ab255364 (knockout cell lysate ab263752) was used. Wild-type HeLa and BCL2 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab182858 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) overnight at 4°C at a 1 in 2000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858) at 1/2000 dilution

Lane 1:

Wild-type HeLa cell lysate at 20 µg

Lane 2:

BCL2 knockout HeLa cell lysate at 20 µg

Lane 2:

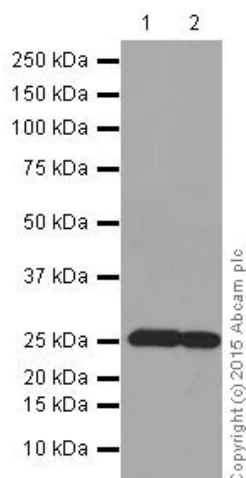
Western blot - Human BCL2 knockout HeLa cell line (ab255364)

Performed under reducing conditions.

Predicted band size: 26 kDa

Observed band size: 26 kDa

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)



Blocking and diluting buffer was 5% NFDM /TBST.

All lanes:

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858) at 1/2000 dilution

Lane 1:

Human fetal kidney lysate at 10 µg

Lane 2:

Human fetal spleen lysate at 10 µg

Secondary

All lanes:

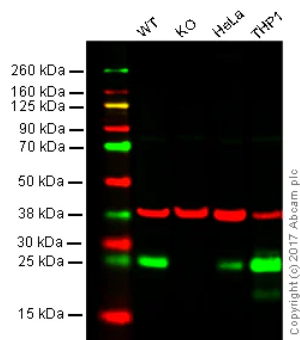
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 26 kDa

Observed band size: 26 kDa

Exposure time: 3min



Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Western blot staining using rabbit Anti-Bcl-2 antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab182858 observed at 26 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab182858 was shown to specifically react with BCL2 when BCL2 knockout samples were used. Wild-type and BCL2 knockout samples were subjected to SDS-PAGE. ab182858 and [ab8245](#) (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml 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-Bcl-2 antibody [EPR17509] (ab182858) at 1 µg/mL

Lane 1:

Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:

BCL2 knockout HAP1 whole cell lysate at 20 µg

Lane 3:

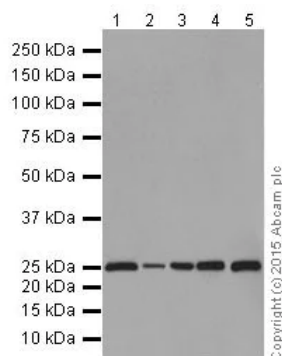
HeLa whole cell lysate at 20 µg

Lane 4:

THP-1 whole cell lysate at 20 µg

Predicted band size: 26 kDa

Observed band size: 26 kDa



Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Blocking and diluting buffer was 5% NFDM /TBST.

All lanes:

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858) at 1/2000 dilution

Lane 1:

Mouse brain lysate at 10 µg

Lane 2:

Mouse heart lysate at 10 µg

Lane 3:

Mouse kidney lysate at 10 µg

Lane 4:

Mouse spleen lysate at 10 µg

Lane 5:

NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate at 10 µg

Secondary

All lanes:

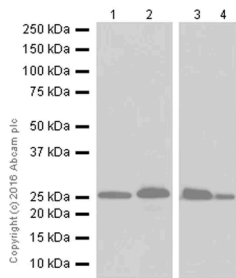
Western blot - Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 26 kDa

Observed band size: 26 kDa

Exposure time: 3min



Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858)

Bcl-2 Western blot staining using rabbit Anti-Bcl-2 antibody

Blocking/Diluting buffer 5% NFDM/TBST

All lanes:

Western blot - Anti-Bcl-2 antibody [EPR17509] (ab182858) at 1/10000 dilution

Lane 1:

NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate at 20 µg

Lane 2:

WEHI-3 (mouse leukemia cell line) whole cell lysate at 20 µg

Lane 3:

Mouse hippocampus at 10 µg

Lane 4:

Mouse heart at 10 µg

Secondary

All lanes:

Goat Anti-Rabbit IgG H&L (HRP) at 1/2000 dilution

Predicted band size: 26 kDa

Observed band size: 26 kDa

Exposure time: 8s

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