abcam

ab219608

Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free

Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608) is a rabbit recombinant monoclonal antibody provided in a PBS only buffer for easy conjugation detecting Bcl-2 in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity
- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR17509
Purification technique	Affinity purification Protein A
Concentration	1.06 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

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

Species	Mouse
Dilution info	-
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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

What is this antibody validated in?
Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P) in Human, Mouse samples.

What is the molecular weight of Bcl-2?
Anti-Bcl-2 [EPR17509] - BSA and Azide free (ab219608) specifically detects a band for Bcl-2 (UniProt: P10415) at a molecular weight of 26kDa.

Specificity confirmed
The specificity of Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608) has been confirmed by Western blot testing in BCL2 Knockout HAP1 cells.

Other related products
We have a range of other formats of antibody clone [EPR17509] also available for your convenience: ab182858, HRP - ab209039, Carrier free - ab219608, Carrier free - ab242336

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

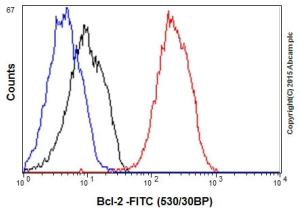
We do not recommend this combination. It is not covered by our product promise.

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.

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

6 product images

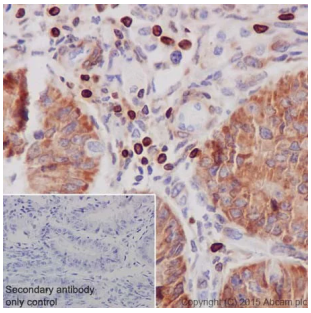


Flow Cytometry (Intracellular) - Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab182858).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608)

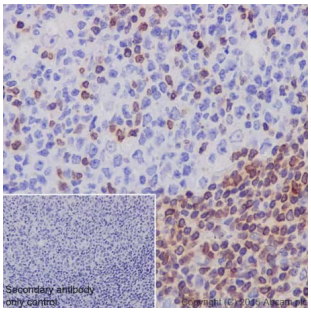
Bcl-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bcl-2 antibody

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab182858).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608)

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

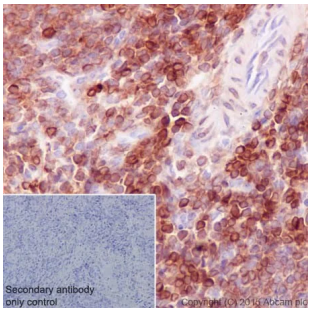
Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling Bcl-2 with ab182858 at 1/1000 followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500. Cytoplasm, nuclear membrane and nucleus staining on lymphocytes of Human tonsil tissue is observed.

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab182858).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608)

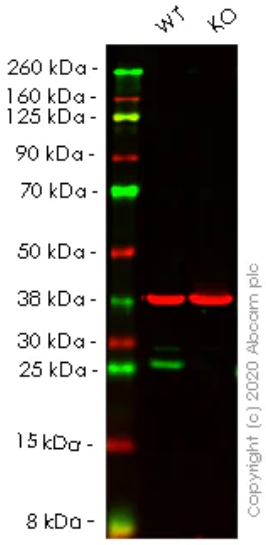
Bcl-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bcl-2 antibody

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab182858).



Western blot - Anti-Bcl-2 antibody [EPR17509] - BSA and Azide free (ab219608)

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

This data was developed using the same antibody clone in a different buffer formulation (ab182858).
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

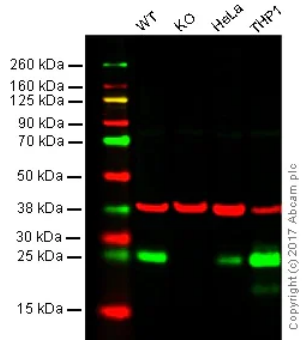
Lane 2:
BCL2 knockout HeLa cell lysate at 20 µg

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] - BSA and Azide free (ab219608)

This data was developed using the same antibody clone in a different buffer formulation (ab182858).
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 ug/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] - BSA and Azide free (ab219608) at 1 µg/mL

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg/mL

Lane 2:
BCL2 knockout HAP1 whole cell lysate at 20 µg/mL

Lane 3:
HeLa whole cell lysate at 20 µg/mL

Lane 4:
THP-1 whole cell lysate at 20 µg/mL

Predicted band size: 26 kDa

Observed band size: 26 kDa

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