abcam

ab233694

Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free

Recombinant | RabMAb

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	EPR21162
Purification technique	Affinity purification Protein A
Concentration	1.029 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

WB

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Target data

See full target information BCL2 pS70

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

ab233694 is the carrier-free version of ab218123.

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.

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

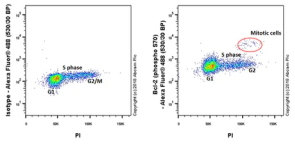
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images



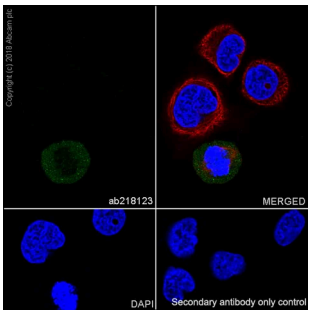
Flow Cytometry (Intracellular) - Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free (ab233694)

Bcl-2 (phospho S70) Flow Cytometry (Intracellular) staining using rabbit Anti-Bcl-2 (phospho S70) antibody

Intracellular flow cytometric analysis of 80% methanol-fixed, 0.1% Tween-20 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling Bcl-2 (phospho S70) with ab218123 at 1/500 dilution (right panel) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.
Cells were pretreated with 20 µg/ml RNase A for 30 minutes to eliminate the non-specific binding between RNA and propidium iodide (PI).

Bcl-2 (phospho S70) is highly expressed in mitotic cells (PMID: 10567572).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab218123).

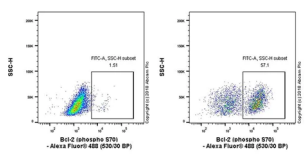


Immunocytochemistry/ Immunofluorescence - Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free (ab233694)

Bcl-2 (phospho S70) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Bcl-2 (phospho S70) antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Bcl-2 (phospho S70) with ab218123 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/100 dilution (green). Confocal image showing positive staining in HeLa cells in M phase. The nuclear counter stain is DAPI (blue).
Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab195889) at 1/200 dilution (red).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab218123).

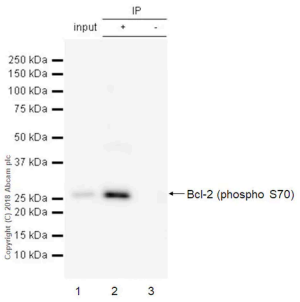


Flow Cytometry (Intracellular) - Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free (ab233694)

Bcl-2 (phospho S70) Flow Cytometry (Intracellular) staining using rabbit Anti-Bcl-2 (phospho S70) antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized Jurkat (human T cell leukemia T lymphocyte) treated with 1 µM paclitaxel for 24h (Right) / Untreated control (Left) cell line labeling Bcl-2 (phospho S70) with ab218123 at 1/500 dilution. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.
Square gate shows Bcl-2 (phospho S70) positive signal. The expression profile is consistent with what has been described in the literature (PMID: 10097113)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab218123).



Immunoprecipitation - Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free (ab233694)

Bcl-2 (phospho S70) was immunoprecipitated from 0.35 mg of Jurkat (human T cell leukemia cells from peripheral blood) treated with 1 µM paclitaxel for 24 hours whole cell lysate with ab218123 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab218123 at 0.5 µg/ml. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution.
Lane 1: Jurkat treated with 1 µM paclitaxel for 24 hours whole cell lysate 10 µg (Input).

Lane 2: ab218123 IP in Jurkat treated with 1 µM paclitaxel for 24 hours whole cell lysate.

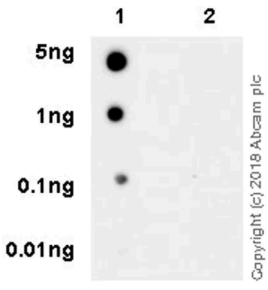
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab218123 in Jurkat treated with 1 µM paclitaxel for 24 hours whole cell lysate.

Blocking/ Dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 15 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab218123).

All lanes:
Immunoprecipitation - Anti-Bcl-2 (phospho S70) antibody [EPR21162] (ab218123)

Predicted band size: 26 kDa



Dot Blot - Anti-Bcl-2 (phospho S70) antibody [EPR21162] - BSA and Azide free (ab233694)

Dot blot analysis of Bcl-2 (phospho S70) labeled with ab218123 at 1/1000 dilution.
Lane 1: Bcl-2 (phospho S70) peptide.
Lane 2: Bcl-2 non-phospho peptide.

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100,000 dilution was used as secondary antibody.

Blocking and dilution buffer: 2% BSA/TBST.

Exposure time: 58 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab218123).

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