abcam

ab117115

Anti-Bcl-2 antibody [Bcl2/100]

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human BCL2 aa 1-100. The exact immunogen used to generate this antibody is proprietary information. Database link P10415
Clone number	Bcl2/100
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab117115 is purified from cell culture supernatant by protein-A affinity chromatography. Purity is > 95% (by SDS-PAGE).

Reactivity data

WB

Tested

Species	Human
Dilution info	1-2 µg/mL

Notes	-

Not recommended

Species	Mouse, Cow, Cat, Pig
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1-5 µg/mL
Notes	-

Predicted

Species	Cow, Cat, Pig
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

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 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

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

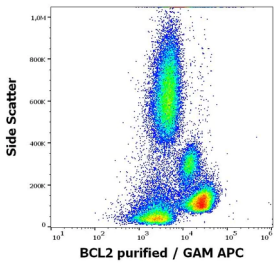
We do not recommend this combination. It is not covered by our product promise.

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.

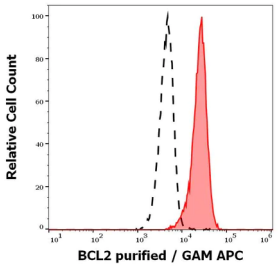
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4 product images



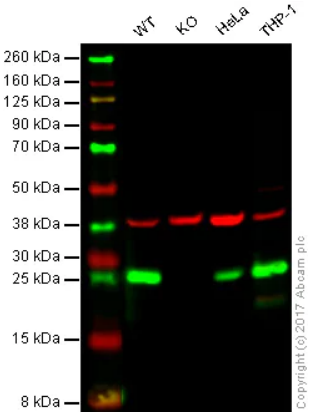
Flow Cytometry (Intracellular) - Anti-Bcl-2 antibody [Bcl2/100] (ab117115)

Flow cytometric analysis of Human peripheral whole blood labeling Bcl-2 with ab117115 at 1 µg/mL.



Flow Cytometry (Intracellular) - Anti-Bcl-2 antibody [Bcl2/100] (ab117115)

Flow cytometric analysis of Human peripheral whole blood labeling Bcl-2 with ab117115 at 1 µg/mL, showing the separation of human lymphocytes (red-filled) from neutrophil granulocytes (black-dashed).



Western blot - Anti-Bcl-2 antibody [Bcl2/100] (ab117115)

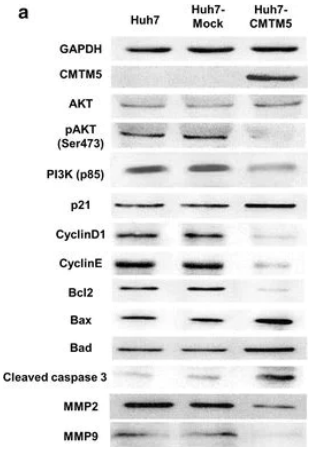
Bcl-2 Western blot staining using mouse Anti-Bcl-2 antibody

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: BCL2 knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: THP-1 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab117115 observed at 26 kDa. Red - loading control, ab181602, observed at 37 kDa.

ab117115 was shown to specifically react with BCL2 when BCL2 knockout samples were used. Wild-type and BCL2 knockout samples were subjected to SDS-PAGE. ab117115 and ab181602 (Rabbit 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-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ab216777 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.
All lanes:
Western blot - Anti-Bcl-2 antibody [Bcl2/100] (ab117115)

Predicted band size: 26 kDa

Observed band size: 26 kDa



Western blot - Anti-Bcl-2 antibody [Bcl2/100] (ab117115)

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

Bcl-2 western blot using anti-Bcl-2 antibody [Bcl2/100] ab117115. Publication image and figure legend from Xu, G. & Dang, C., 2017, Cancer Cell Int, PubMed 29213215.

ab117115 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab117115 please see the product overview.

CMTM5 inhibits tumour growth and metastasis through regulating PI3K-AKT signalling. a The related proteins of PI3K/Akt pathway, including AKT, pAKT, PI3K p85 subunit, p21, cyclinD1,

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cyclinE, Bcl2, Bax, Bad, cleaved caspase 3, MMP2 and MMP9 in CMTM5 overexpressed Huh7 cells were examined by western blot. b The relative kinase activity of PI3K in CMTM5 overexpressed Huh7 cells were examined by PI3K kinase ELISA assay. c The proteins levels of AKT, pAKT and P85 in Huh7-CMTM5 cells after treatment of PI3K inhibitor LY294002 (10 μM). d–g Huh7-CMTM5 cells were treated with or without LY294002, Cell growth (d), cell apoptosis (e) and cell metastatic and invasion (f, g) were examined. h–j The expression of PI3K p85 and pAKT (Ser473) in 76 paired tumour and adjacent normal liver tissues were examined by IHC staining and scored from 0 to 9 as described in the method. The left plots (h) were representative results of IHC staining against indicated proteins. The right plots were the statistical analysis of the correlation of CMTM5 expression with p85 (i) and pAKT (j) in HCC tissues (Spearman correlation test). Data are shown as mean ± SD from three independent experiments. *p < 0.05, **p < 0.01, ***p < 0.001, One-Way ANOVA with Dunnett's test

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