abcam

Product datasheet

Anti-Bcl-2 antibody [Bcl2/100] ab117115

KO VALIDATED

1 Abreviews 50 References 3 Images

Overview

Product name	Anti-Bcl-2 antibody [Bcl2/100]
Description	Mouse monoclonal [Bcl2/100] to Bcl-2
Host species	Mouse
Tested applications	**Suitable for:** WB, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human **Predicted to work with:** Cow, Cat, Pig **Does not react with:** Mouse
Immunogen	Synthetic peptide within Human Bcl-2 aa 1-100. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please **contact** our Scientific Support team to discuss your requirements. Database link: **P10415** Run BLAST with Run BLAST with
Positive control	WB: Wild type HAP1 whole cell lysate, HeLa, and THP-1 whole cell lysates. Flow Cyt (Intra): Human peripheral whole blood.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.1% Sodium azide Constituent: PBS

Purity	Protein A purified
Purification notes	ab117115 is purified from cell culture supernatant by protein-A affinity chromatography. Purity is > 95% (by SDS-PAGE).
Clonality	Monoclonal
Clone number	Bcl2/100
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab117115 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

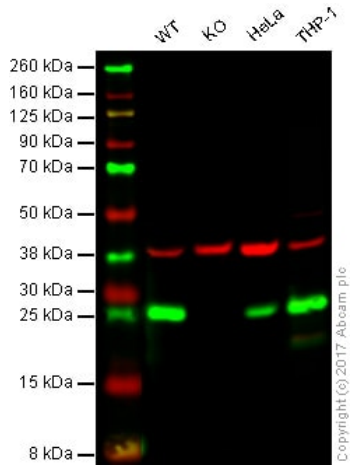
Application	Abreviews	Notes
WB		Use a concentration of 1 - 2 µg/ml. Predicted molecular weight: 26 kDa.
Flow Cyt (Intra)		Use a concentration of 1 - 5 µg/ml.

Target

Function	Suppresses apoptosis in a variety of cell systems including factor-dependent lymphohematopoietic and neural cells. Regulates cell death by controlling the mitochondrial membrane permeability. Appears to function in a feedback loop system with caspases. 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). May attenuate inflammation by impairing NLRP1-inflammasome activation, hence CASP1 activation and IL1B release (PubMed:17418785).
Tissue specificity	Expressed in a variety of tissues.
Involvement in disease	A chromosomal aberration involving BCL2 has been found in chronic lymphatic leukemia. Translocation t(14;18)(q32;q21) with immunoglobulin gene regions. BCL2 mutations found in non-Hodgkin lymphomas carrying the chromosomal translocation could be attributed to the Ig somatic hypermutation mechanism resulting in nucleotide transitions.
Sequence similarities	Belongs to the Bcl-2 family.
Domain	BH1 and BH2 domains are required for the interaction with BAX and for anti-apoptotic activity. The BH4 motif is required for anti-apoptotic activity and for interaction with RAF1 and EGLN3. The loop between motifs BH4 and BH3 is required for the interaction with NLRP1.
Post-translational modifications	Phosphorylation/dephosphorylation on Ser-70 regulates anti-apoptotic activity. Growth factor-stimulated phosphorylation on Ser-70 by PKC is required for the anti-apoptosis activity and occurs during the G2/M phase of the cell cycle. In the absence of growth factors, BCL2 appears to be phosphorylated by other protein kinases such as ERKs and stress-activated kinases. Phosphorylated by MAPK8/JNK1 at Thr-69, Ser-70 and Ser-87, wich stimulates starvation-induced autophagy. Dephosphorylated by protein phosphatase 2A (PP2A). Proteolytically cleaved by caspases during apoptosis. The cleaved protein, lacking the BH4 motif, has pro-apoptotic activity, causes the release of cytochrome c into the cytosol promoting further caspase activity.

	Monoubiquitinated by PARK2, leading to increase its stability. Ubiquitinated by SCF(FBXO10), leading to its degradation by the proteasome.
Cellular localization	Mitochondrion outer membrane. Nucleus membrane. Endoplasmic reticulum membrane.

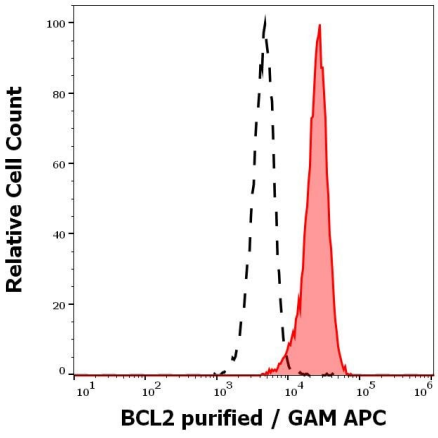
Images



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

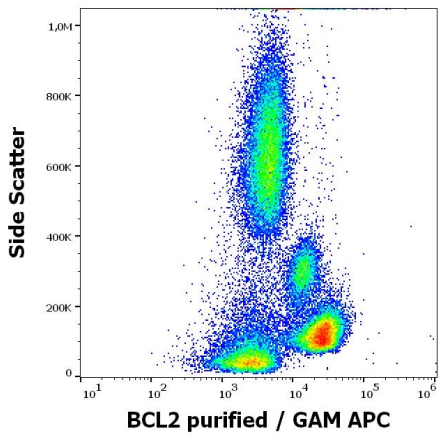
Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: BCL2 knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: THP-1 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab117115 observed at 26 kDa. Red - loading control, **ab181602**, observed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



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).



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.

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