abcam

ab199099

Anti-Bcl-XL antibody [E18] - 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	E18
Purification technique	Affinity purification Protein A
Specificity	This antibody should recognize Bcl-XL, Bcl-xS and Bcl-x(beta) as the immunogen sequence is common to them. The antibody does not cross-react with other Bcl-2 family members.
Dissociation constant	6.5 x 10^{-11} M
Concentration	1.025 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	-
Notes	Please check the parent abID, ab32370, for more information on dilutions.

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

Target data

See full target information BCL2L1

Function

Potent inhibitor of cell death. Inhibits activation of caspases. Appears to regulate cell death by blocking the voltage-dependent anion channel (VDAC) by binding to it and preventing the release of the caspase activator, CYC1, from the mitochondrial membrane. Also acts as a regulator of G2 checkpoint and progression to cytokinesis during mitosis. Isoform Bcl-X(L) also regulates presynaptic plasticity, including neurotransmitter release and recovery, number of axonal mitochondria as well as size and number of synaptic vesicle clusters. During synaptic stimulation, increases ATP availability from mitochondria through regulation of mitochondrial membrane ATP synthase F(1)F(0) activity and regulates endocytic vesicle retrieval in hippocampal neurons through association with DMN1L and stimulation of its GTPase activity in synaptic vesicles. May attenuate inflammation

impairing NLRP1-inflammasome activation, hence CASP1 activation and IL1B release (PubMed:17418785). Isoform Bcl-X(S) promotes apoptosis.

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

ab199099 is the carrier-free version of ab32370.

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-XL also known as Bcl-xL or Bcl-Xl protein is a member of the Bcl-2 protein family playing an important role in regulating cell death. Bcl-XL inhibits apoptosis by binding to pro-apoptotic proteins preventing the release of cytochrome c from mitochondria. This protein has a molecular weight of approximately 30 kDa. Bcl-xL is widely expressed in tissues notably in the brain endothelial cells and hematopoietic tissues where it contributes to cell survival.
Biological function summary	This protein acts as an anti-apoptotic molecule within the mitochondria and is part of the Bcl-2 family complex. Bcl-XL modulates the balance between pro-apoptotic and anti-apoptotic signals impacting cell fate. By binding and sequestering pro-apoptotic members such as Bax and Bak Bcl-XL prevents mitochondrial outer membrane permeabilization important for avoiding programmed cell death. This function not only supports cellular longevity but also understanding cancer cell survival.
Pathways	The Bcl-XL protein holds a significant position in the apoptotic signaling pathways. It is particularly involved in the intrinsic pathway where its interactions with mitochondrial proteins Bax and Bak determine cell survival or death. It is interconnected with the PI3K/AKT pathway where AKT kinase activity can upregulate Bcl-XL expression demonstrating how survival signals are transmitted. These interactions highlight its pivotal role in balancing life and death at the cellular level.
Associated diseases and disorders	Bcl-XL's overexpression often connects to the progression of cancers and resistance to chemotherapy. By inhibiting programmed cell death Bcl-XL allows cancer cells to evade traditional treatments. Furthermore research implicates Bcl-XL in neurodegenerative disorders where its interaction with Bcl-2 proteins disrupts normal apoptotic processes contributing to cellular dysfunction and disease. Understanding Bcl-XL's disease-related roles furthers the development of targeted therapies combating its protective effects in pathological contexts.

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

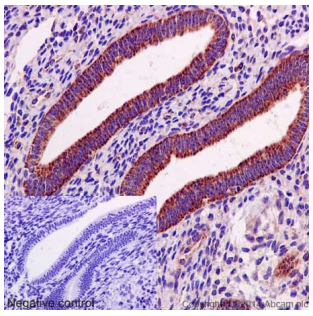
We do not recommend this combination. It is not covered by our product promise.

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.

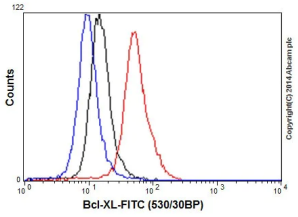
Full details and terms and conditions can be found here:
Terms & Conditions.

10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

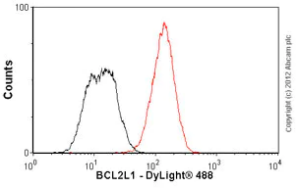
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human endometrium tissue labelling Bcl-XL with purified ab32370 at 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit HRP (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).



Flow Cytometry (Intracellular) - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

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

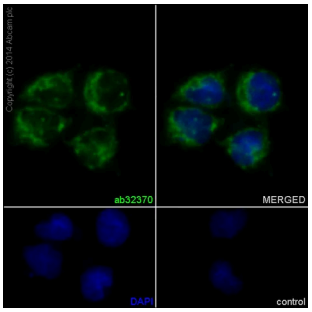
Intracellular Flow Cytometry analysis of Jurkat cells labelling Bcl-XL with purified ab32370 at 1/20 (red). Cells were fixed with 2% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).



Flow Cytometry (Intracellular) - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

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

Overlay histogram showing DU145 cells stained with unpurified ab32370 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab32370, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was a goat anti-rabbit DyLight® 488 (IgG; H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).

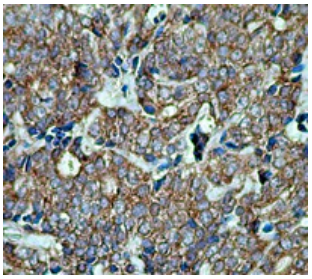


Immunocytochemistry/ Immunofluorescence - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

Bcl-XL Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Bcl-XL antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling Bcl-XL with purified ab32370 at 1/500. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, a goat anti-rabbit Alexa Fluor® 488 (IgG; 1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/500) and secondary antibody, ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

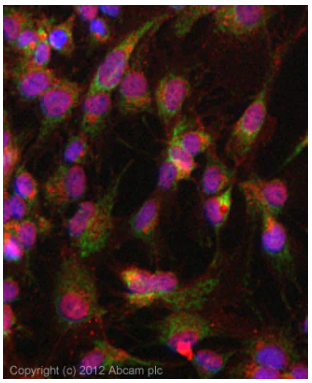
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

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

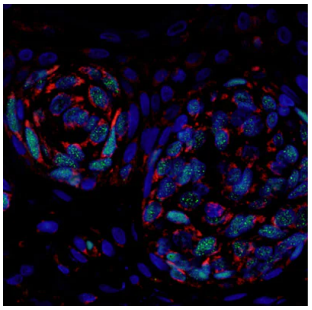
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostate carcinoma tissue labelling Bcl-XL with unpurified ab32370 at 1/50.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).



Immunocytochemistry/ Immunofluorescence - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

Bcl-XL Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Bcl-XL antibody

ICC/IF image of unpurified ab32370 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab32370, 1/100) overnight at +4°C. The secondary antibody (green) was ab96899, goat anti-rabbit DyLight® 488 (IgG; H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).

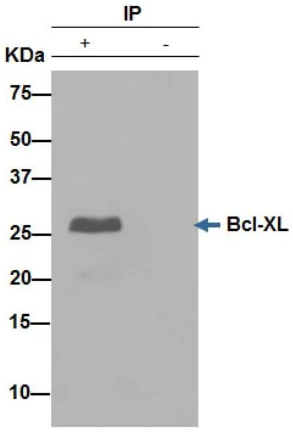


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

Immunohistochemistry of human primary melanoma, staining Bcl-XL (red) with unpurified ab32370.
Antigen retrieval was performed in EDTA/Tris buffer (pH 8) before being blocked with 10%NGS for one hour at room temperature. Samples were incubated with primary antibody (1/50) at room

Image from Medic S & Ziman M PLoS One. 2010 Apr 22;5(4):e9977. Fig 5.; doi:10.1371/journal.pone.0009977; April 22 2010 PLoS ONE 5(4): e9977.

temperature for one hour. An AlexaFluor®-conjugated anti-rabbit IgG 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 (ab32370).



Immunoprecipitation - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

ab32370 (purified) at 1/30 immunoprecipitating Bcl-XL in Jurkat cell lysate (Lane 1). Lane 2 - PBS. For western blotting, a HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG was used as the secondary antibody (1/1500).
Blocking buffer and concentration: 5% NFDM/TBST.

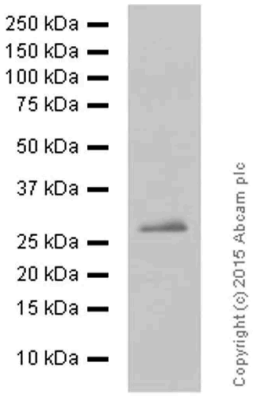
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32370).

All lanes:
Immunoprecipitation - Anti-Bcl-XL antibody [E18] (ab32370)

Predicted band size: 26 kDa

Observed band size: 26 kDa



Western blot - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

Blocking buffer and concentration: 5% NFDM/TBST
Diluting buffer and concentration: 5% NFDM/TBST

All lanes:
Western blot - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

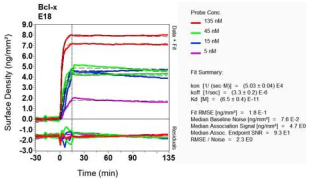
All lanes:
C6 (rat glioma) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Predicted band size: 26 kDa

Exposure time: 30s



OI-RD Scanning - Anti-Bcl-XL antibody [E18] - BSA and Azide free (ab199099)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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