Anti-Bcl-2 antibody ab59348

Overview

Product name: Anti-Bcl-2 antibody
Description: Rabbit polyclonal to Bcl-2
Host species: Rabbit
Specificity: ab59348 detects endogenous levels of total Bcl-2 protein.
Tested applications: Suitable for: WB, IHC-P, ELISA, ICC/IF
Species reactivity: Reacts with: Mouse, Rat, Human
Immunogen: Synthetic peptide corresponding to Human Bcl-2.
Database link: P10415
General notes: Store at -20°C for year

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: pH: 7.40
Preservative: 0.02% Sodium azide
 Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride
Without Mg+2 and Ca+2
Purity: Immunogen affinity purified
Purification notes: Affinity purified from rabbit antiserum by affinity chromatography, using epitope specific immunogen
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab59348 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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, which 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 increased its stability. Ubiquitinated by SCF(FBXO10), leading to its degradation by the proteasome.

Cellular localization

Application | Abreviews | Notes
--- | --- | ---
WB | ★★★★★ | 1/500 - 1/1000. Detects a band of approximately 26 kDa.
IHC-P | ★★★ | Use at an assay dependent concentration.
ELISA | | 1/10000.
ICC/IF | | Use at an assay dependent concentration.

Target

Cellular localization

Images
**Western blot - Anti-Bcl-2 antibody (ab59348)**

**All lanes**: Anti-Bcl-2 antibody (ab59348) at 1/500 dilution

**Lane 1**: Extracts from K562 cells with no immunizing peptide

**Lane 2**: Extracts from K562 cells with immunizing peptide

**Observed band size**: 26 kDa

*why is the actual band size different from the predicted?*

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bcl-2 antibody (ab59348)**

ab59348, at a 1/50 dilution, staining human Bcl-2 in colon carcinoma, using Immunohistochemistry, Paraffin embedded tissue, in the absence (left image) and presence of the immunizing peptide (right image).

**ELISA - Anti-Bcl-2 antibody (ab59348)**


ELISA analysis of primary cultured rat cortical neurons, detecting Bcl-2 using ab59348.

Cells were treated with (Tat) or without Tat (control) and either Estradiol, Genistein or Daidzein. Lysates were prepared after 24 hours. A 96-well plate was coated using carbonate coating buffer. 20 µg cell lysate was added to wells and incubated overnight at 4°C. Plates were blocked with 1% BSA for 2 hr at room temperature. Primary antibody (1/5000) was added to sample wells before incubating overnight at 4°C. A goat anti-rabbit ALP-conjugated IgG was used as secondary antibody and phosphatase substrate mixture was added. Absorbance was read at 650nm.
Immunocytochemistry/Immunofluorescence analysis of HepG2 cells labelling Bcl-2 with ab59348 in the absence (left image) and presence of the immunizing peptide (right image).

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