abcam

ab233700

Anti-Bok antibody [BOK-R1-5-1] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	BOK-R1-5-1
Purification technique	Affinity purification Protein A
Concentration	1.03 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information BOK

Function

Isoform 1. Apoptosis regulator that functions through different apoptotic signaling pathways (PubMed:15102863, PubMed:20673843, PubMed:27076518). Plays a roles as pro-apoptotic protein that positively regulates intrinsic apoptotic process in a BAX- and BAK1-dependent manner or in a BAX- and BAK1-independent manner (PubMed:15102863, PubMed:27076518). In response to endoplasmic reticulum stress promotes mitochondrial apoptosis through downstream BAX/BAK1 activation and positive regulation of PERK-mediated unfolded protein response (By similarity). Activates apoptosis independently of heterodimerization with survival-promoting BCL2 and BCL2L1 through induction of mitochondrial outer membrane permeabilization, in a BAX- and BAK1-independent manner, in response to inhibition of ERAD-proteasome degradation system, resulting in cytochrome c release (PubMed:27076518). In response to DNA damage, mediates intrinsic apoptotic process in a TP53-dependent manner (PubMed:15102863). Plays a role in granulosa cell apoptosis by CASP3 activation (PubMed:20673843). Plays a roles as anti-apoptotic protein during neuronal apoptotic process, by negatively regulating poly ADP-ribose polymerase-dependent cell death through regulation of neuronal calcium homeostasis and mitochondrial bioenergetics in response to NMDA excitation (By similarity). In addition to its role in apoptosis, may regulate trophoblast cell proliferation during the early stages of placental development, by acting on G1/S transition through regulation of CCNE1 expression (PubMed:19942931). May also play a role as an inducer of autophagy by disrupting interaction between MCL1 and BECN1 (PubMed:24113155). Isoform 2. Pro-apoptotic molecule exerting its function through the mitochondrial pathway.

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

ab233700 is the carrier-free version of ab233072.

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	BCL2-related ovarian killer (Bok) is a pro-apoptotic member of the Bcl-2 protein family contributing to apoptosis regulation. Bok sometimes referred to by its weight as approximately 23-25 kDa facilitates programmed cell death through mitochondrial pathways. Researchers have identified its expression primarily in

	reproductive tissues like ovaries and testis with some presence in the liver. Bok interacts with other Bcl-2 family proteins which act as apoptosis regulators creating a balance between cell survival and death.
Biological function summary	Bok plays an important role in the intrinsic apoptosis pathway by modulating mitochondrial outer membrane permeabilization. Bok forms protein complexes with other Bcl-2 family members like Bax and Bak contributing to cytochrome c release. This release is important for the activation of caspases leading to cellular apoptosis. Bok also exercises a regulatory role on calcium homeostasis within cells although its exact mechanisms remain under study.
Pathways	Bok integrates into the mitochondrial apoptosis pathway and the endoplasmic reticulum stress response influencing cellular fate decisions. Within these pathways Bok interacts with proteins such as Bax Bak and Bcl-2 balancing pro-apoptotic and anti-apoptotic signals. Bok's ability to influence these pathways demonstrates its importance in maintaining cellular homeostasis and response to stress signals.
Associated diseases and disorders	Bok has been associated with cancer and neurodegenerative diseases. Its role in promoting apoptosis links it to conditions where apoptosis is dysregulated such as tumorigenesis where reduced Bok activity could contribute to cancer progression. In neurodegenerative disorders like Alzheimer's Bok's interaction with proteins like Bax may exacerbate neuronal loss through increased apoptosis emphasizing the need for understanding Bok in developing therapeutic strategies.

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

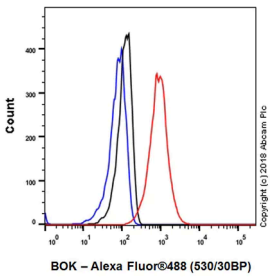
We do not recommend this combination. It is not covered by our product promise.

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:

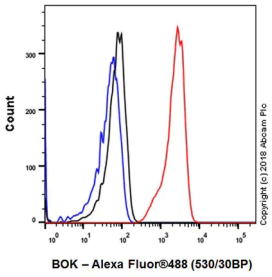
3 product images



Flow Cytometry (Intracellular) - Anti-Bok antibody [BOK-R1-5-1] - BSA and Azide free (ab233700)

Bok Flow Cytometry (Intracellular) staining using rabbit Anti-Bok antibody

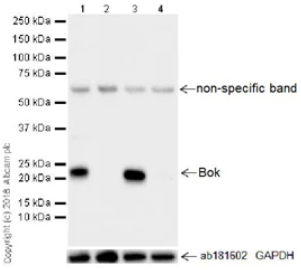
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized MCF7 (Human breast adenocarcinoma epithelial cell) cells labelling Bok with ab233072 at 1/50 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabelled control (cells incubated with secondary antibody only) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution 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 (ab233072).



Flow Cytometry (Intracellular) - Anti-Bok antibody [BOK-R1-5-1] - BSA and Azide free (ab233700)

Bok Flow Cytometry (Intracellular) staining using rabbit Anti-Bok antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HepG2 (Human hepatocellular carcinoma epithelial cell) cell line labeling Bok with ab233072 at 1/50 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabelled control (cells incubated with secondary antibody only) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution 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 (ab233072).



Western blot - Anti-Bok antibody [BOK-R1-5-1] - BSA and Azide free (ab233700)

Blocking/diluting buffer and concentration: 5% NFDM/TBST.
The cell lysates were kindly provided by our collaborator Dr. Thomas Kaufmann, University of Bern, Switzerland.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab233072).

All lanes:
Western blot - Anti-Bok antibody [BOK-R1-5-1] - BSA and Azide free (ab233700) at 1/5000 dilution

Lane 1:
Wild-type MEF cell lysate at 20 µg

Lane 2:
Bok knockout MEF cell lysate at 20 µg

Lane 3:
Wild-type HepG2 cell lysate at 20 µg

Lane 4:
Bok knockout HepG2 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 23 kDa

Exposure time: 70s

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