10320 Camino Santa Fe, Suite G
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Bok Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10032

Specification

Bok Antibody - Product Information

Application	**WB**
Primary Accession	Q9UMX3
Other Accession	EAW71269
Reactivity	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**23280**

Bok Antibody - Additional Information

Gene ID 666

Application & Usage	**Western blot analysis (0.5-4 µg/ml).**

Other Names
Bcl-2-related ovarian killer

Target/Specificity
Bok

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2 mg/ml) peptide affinity purified rabbit anti-Bok polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Bok Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Bok Antibody - Protein Information

Name BOK (HGNC:1087)

Synonyms BCL2L9

Function
[Isoform 1]: Apoptosis regulator that functions through different apoptotic signaling pathways (PubMed:27076518, PubMed:15102863, PubMed:20673843). 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:27076518, PubMed:15102863). 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).

Cellular Location
[Isoform 1]: Mitochondrion membrane {ECO:0000250|UniProtKB:O35425}; Single-pass membrane protein {ECO:0000250|UniProtKB:O35425}. Endoplasmic reticulum membrane; Single-pass membrane protein {ECO:0000250|UniProtKB:O35425}. Mitochondrion inner membrane. Cytoplasm. Nucleus. Mitochondrion. Endoplasmic reticulum. Mitochondrion outer membrane. Early endosome membrane {ECO:0000250|UniProtKB:O35425}. Recycling endosome membrane {ECO:0000250|UniProtKB:O35425}. Nucleus outer membrane {ECO:0000250|UniProtKB:O35425}. Golgi apparatus, cis-Golgi network membrane {ECO:0000250|UniProtKB:O35425}. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:O35425}. Membrane. Note=Nuclear and cytoplasmic compartments in the early stages of apoptosis and during apoptosis it associates with mitochondria (PubMed:19942931). In healthy cells, associates loosely with the membrane in a hit-and-run mode. The insertion and accumulation on membranes is enhanced through the activity of death signals, resulting in the integration of the membrane-bound protein into the membrane (PubMed:15868100). The transmembrane domain controls subcellular localization; constitutes a tail-anchor. Localizes in early and late endosome upon blocking of apoptosis. Must localize to the mitochondria to induce mitochondrial outer membrane permeabilization and apoptosis (By similarity) {ECO:0000250|UniProtKB:O35425, ECO:0000269|PubMed:15868100, ECO:0000269|PubMed:19942931}

Tissue Location
Expressed mainly in oocytes; weak expression in granulosa cells of the developing follicles. In adult human ovaries, expressed in granulosa cells at all follicular stages, but expression in primordial/primary follicles granulosa cell is stronger than in secondary and antral follicles.

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Bok Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Bok Antibody - Images

Bok Antibody - Background

Bok (Bcl-2-related ovarian killer) is a pro-apoptotic Bcl-2 family protein identified in the ovary based on its dimerization with the anti-apoptotic protein Mcl-1. In addition to the Bcl-2 homology (BH) domains 1 and 2 and the transmembrane sequence, Bok also has a BH3 domain believed to be important for dimerization with selective anti-apoptotic Bcl-2 proteins and cell killing. Bok interacts strongly with some (Mcl-1, BHRF1, and Bfl-1) but not other (Bcl-2, Bcl-xL, and Bcl-w) anti-apoptotic members. In addition, cell killing induced by Bok was suppressed following coexpression with Mcl-1 and BHRF1, but not with Bcl-2, further indicating that Bok heterodimerized only with selective anti-apoptotic Bcl-2 proteins. Bok was highly expressed in the ovary, testis and uterus.