BAX Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Bax, Polyclonal Antibody
Full Product Name	Bax Antibody
Product Gene Name	anti-Bax antibody
Product Synonym Names	Apoptosis regulator BAX; BAX; Bax-protein; BAX_HUMAN; BAXA; Baxdelta2G9; Baxdelta2G9omega; Baxdelta2omega; Bcl-2-like protein 4; BCL2 associated X protein; BCL2 associated X protein omega; BCL2 associated X protein transcript variant delta2; Bcl2-L-4; BCL2L4; membrane isoform alpha
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Concentration	1mg/ml (lot specific)
Specificity	Bax Antibody detects endogenous levels of total Bax. Tissue Specificity: Expressed in a wide variety of tissues. Isoform Psi is found in glial tumors. Isoform Alpha is expressed in spleen, breast, ovary, testis, colon and brain, and at low levels in skin and lung. Isoform Sigma is expressed in spleen, breast, ovary, testis, lung, colon, brain and at low levels in skin. Isoform Alpha and isoform Sigma are expressed in pro-myelocytic leukemia, histiocytic lymphoma, Burkitt's lymphoma, T-cell lymphoma, lymphoblastic leukemia, breast adenocarcinoma, ovary adenocarcinoma, prostate carcinoma, prostate adenocarcinoma, lung carcinoma, epidermoid carcinoma, small cell lung carcinoma and colon adenocarcinoma cell lines.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	Bax peptide (MBS9618033) is used for blocking the activity of Bax antibody (MBS9613952)
Molecular Weight	21,184 Da
Chromosome Location	Chromosome: 19; NC_000019.9 (49458117..49465055). Location: 19q13.3-q13.4
OMIM	600040
3D Structure	ModBase 3D Structure for Q07812
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human Bax.
Conjugation	Unconjugated
Fragment	Fab fragment

Subunit Structure	Homodimer. Forms higher oligomers under stress conditions. Forms heterooligomers with BAK. Interacts with BCL2L11. Interaction with BCL2L11 promotes BAX oligomerization and association with mitochondrial membranes, with subsequent release of cytochrome c. Forms heterodimers with BCL2, BCL2L1 isoform Bcl-X (L), BCL2L2, MCL1 and A1. Interacts with SH3GLB1 and HN. Interacts with SFN and YWHAZ; the interaction occurs in the cytoplasm. Under stress conditions, JNK-mediated phosphorylation of SFN and YWHAZ, releases BAX to mitochondria. Isoform Sigma interacts with BCL2A1 and BCL2L1 isoform Bcl-X (L). Interacts with RNF144B, which regulates the ubiquitin-dependent stability of BAX. Interacts with CLU under stress conditions that cause a conformation change leading to BAX oligomerization and association with mitochondria. Does not interact with CLU in unstressed cells. Interacts with FAIM2/LFG2. Interacts with RTL10/BOP. Interacts (via a C-terminal 33 residues) with NOL3 (via CARD domain); inhibits BAX activation and translocation and consequently cytochrome c release from mitochondria. Interacts with GIMAP3/IAN4 and GIMAP5/IAN5; this interaction is increased, when cells initiate apoptosis upon IL2 withdrawal. (Microbial infection) Interacts with adenovirus E1B 19K protein; this interaction blocks BAX oligomerization. (Microbial infection) Interacts with human cytomegalovirus/HHV-5 protein vMIA/UL37. (Microbial infection) Interacts with enterovirus protein 2B; this interaction activates BAX-induced apoptosis.
Similarity	Intact BH3 motif is required by BIK, BID, BAK, BAD and BAX for their pro-apoptotic activity and for their interaction with anti-apoptotic members of the Bcl-2 family.Belongs to the Bcl-2 family.
Subcellular Location	Mitochondrion outer membrane>Single-pass membrane protein. Cytoplasm. Note: Colocalizes with 14-3-3 proteins in the cytoplasm. Under stress conditions, undergoes a conformation change that causes release from JNK-phosphorylated 14-3-3 proteins and translocation to the mitochondrion membrane.Cytoplasm. Cytoplasm. Cytoplasm.
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-Bax antibody	Peptide ELISA (EIA)
Application Notes for anti-Bax antibody	Peptide ELISA: 1:20,000-1:40,000
Related Product Information for anti-Bax antibody	Plays a role in the mitochondrial apoptotic process. Under normal conditions, BAX is largely cytosolic via constant retrotranslocation from mitochondria to the cytosol mediated by BCL2L1/Bcl-xL, which avoids accumulation of toxic BAX levels at the mitochondrial outer membrane (MOM). Under stress conditions, undergoes a conformation change that causes translocation to the mitochondrion membrane, leading to the release of cytochrome c that then triggers apoptosis. Promotes activation of CASP3, and thereby apoptosis.
Other Notes	Small volumes of anti-Bax antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Bax purchase	MBS9613952 is an antibody targeting Bax. Also known as Bax Antibody. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Bax. It may not necessarily be applicable to this product.

NCBI GI #	4757838
NCBI GeneID	581
NCBI Accession #	NP_004315.1
UniProt Primary Accession #	Q07812
UniProt Secondary Accession #	P55269; Q07814; Q07815; Q8WZ49; Q9NR76; Q9NYG7; Q9UCZ6; Q9UCZ7; Q9UQD6; A8K4W1
UniProt Related Accession #	Q07812
GenBank Nucleotide #	NM_004324.3
NCBI Official Full Name	apoptosis regulator BAX isoform beta
NCBI Official Synonym Full Names	BCL2-associated X protein
NCBI Official Symbol	BAX
NCBI Official Synonym Symbols	BCL2L4

UniProt Protein Name	Apoptosis regulator BAX
UniProt Synonym Protein Names	Bcl-2-like protein 4
Protein Family	Apoptosis regulator
UniProt Gene Name	BAX
UniProt Synonym Gene Names	BCL2L4; Bcl2-L-4
UniProt Entry Name	BAX_HUMAN
NCBI Protein Information	apoptosis regulator BAX; bcl2-L-4; bcl-2-like protein 4; BCL2-associated X protein omega; BCL2-associated X protein transcript variant delta2
NCBI Summary for Bax	The protein encoded by this gene belongs to the BCL2 protein family. BCL2 family members form hetero- or homodimers and act as anti- or pro-apoptotic regulators that are involved in a wide variety of cellular activities. This protein forms a heterodimer with BCL2, and functions as an apoptotic activator. This protein is reported to interact with, and increase the opening of, the mitochondrial voltage-dependent anion channel (VDAC), which leads to the loss in membrane potential and the release of cytochrome c. The expression of this gene is regulated by the tumor suppressor P53 and has been shown to be involved in P53-mediated apoptosis. Multiple alternatively spliced transcript variants, which encode different isoforms, have been reported for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for Bax	BAX: Accelerates programmed cell death by binding to, and antagonizing the apoptosis repressor BCL2 or its adenovirus homolog E1B 19k protein. Under stress conditions, undergoes a conformation change that causes translocation to the mitochondrion membrane, leading to the release of cytochrome c that then triggers apoptosis. Promotes activation of CASP3, and thereby apoptosis. Homodimer. Forms higher oligomers under stress conditions. Interacts with BCL2L11. Interaction with BCL2L11 promotes BAX oligomerization and association with mitochondrial membranes, with subsequent release of cytochrome c. Forms heterodimers with BCL2, E1B 19K protein, BCL2L1 isoform Bcl-X(L), BCL2L2, MCL1 and A1. Interacts with SH3GLB1 and HN. Interacts with SFN and YWHAZ; the interaction occurs in the cytoplasm. Under stress conditions, JNK-mediated phosphorylation of SFN and YWHAZ, releases BAX to mitochondria. Isoform Sigma interacts with BCL2A1 and BCL2L1 isoform Bcl-X(L). Interacts with RNF144B, which regulates the ubiquitin-dependent stability of BAX. Interacts with CLU under stress conditions that cause a conformation change leading to BAX oligomerization and association with mitochondria. Does not interact with CLU in unstressed cells. Interacts with FAIM2/LFG2. Interacts with human cytomegalovirus/HHV-5 protein vMIA/UL37. Expressed in a wide variety of tissues. Isoform Psi is found in glial tumors. Isoform Alpha is expressed in spleen, breast, ovary, testis, colon and brain, and at low levels in skin and lung. Isoform Sigma is expressed in spleen, breast, ovary, testis, lung, colon, brain and at low levels in skin. Isoform Alpha and isoform Sigma are expressed in pro- myelocytic leukemia, histiocytic lymphoma, Burkitt's lymphoma, T-cell lymphoma, lymphoblastic leukemia, breast adenocarcinoma, ovary adenocarcinoma, prostate carcinoma, prostate adenocarcinoma, lung carcinoma, epidermoid carcinoma, small cell lung carcinoma and colon adenocarcinoma cell lines. Belongs to the Bcl-2 family. 8 isoforms of the human protein are produced by alternative splicing. Protein type: Tumor suppressor; Mitochondrial; Membrane protein, integral; Apoptosis Chromosomal Location of Human Ortholog: 19q13.3-q13.4 Cellular Component: mitochondrial permeability transition pore complex; pore complex; endoplasmic reticulum membrane; mitochondrial outer membrane; mitochondrion; membrane; endoplasmic reticulum; nuclear envelope; nucleus; cytosol Molecular Function: identical protein binding; protein binding; protein homodimerization activity; protein heterodimerization activity; channel activity; BH3 domain binding; lipid binding Biological Process: hypothalamus development; viral reproduction; regulation of cell cycle; positive regulation of apoptosis; response to toxin; germ cell programmed cell death; myeloid cell homeostasis; B cell apoptosis; germ cell development; regulation of mammary gland epithelial cell proliferation; spermatid differentiation; regulation of mitochondrial membrane potential; development of secondary sexual characteristics; protein insertion into mitochondrial membrane during induction of apoptosis; establishment and/or maintenance of transmembrane electrochemical gradient; negative regulation of neuron apoptosis; negative regulation of protein binding; kidney development; release of cytochrome c from mitochondria; positive regulation of B cell apoptosis; regulation of protein homodimerization activity; vagina development; protein oligomerization; fertilization; unfolded protein response, activation of signaling protein activity; induction of apoptosis via death domain receptors; DNA damage response, signal transduction resulting in induction of apoptosis; retina development in camera-type eye; negative regulation of fibroblast proliferation; reduction of endoplasmic reticulum calcium ion concentration; glycosphingolipid metabolic process; cerebral cortex development; mitochondrial fragmentation during apoptosis; regulation of nitrogen utilization; post-embryonic camera-type eye morphogenesis; positive regulation of pigmentation; regulation of protein heterodimerization activity; T cell homeostatic proliferation; apoptosis; negative regulation of peptidyl-serine phosphorylation; positive regulation of apoptosis involved in mammary gland involution; neuron migration; release of matrix enzymes from mitochondria; response to salt stress; positive regulation of protein oligomerization; apoptotic mitochondrial changes; B cell homeostatic proliferation; B cell homeostasis; ovarian follicle development; positive regulation of neuron apoptosis; response to gamma radiation; B cell negative selection; response to axon injury; protein homooligomerization; caspase activation; transformed cell apoptosis; mitochondrial fusion; Sertoli cell proliferation; odontogenesis of dentine-containing teeth; endoplasmic reticulum calcium ion homeostasis; neuron apoptosis; homeostasis of number of cells within a tissue; blood vessel remodeling; retinal cell programmed cell death; positive regulation of release of sequestered calcium ion into cytosol; caspase activation via cytochrome c
Research Articles on Bax	**1.** Immunohistochemical determination of bax may be helpful for the typing of ovarian tumors as benign, borderline and malignant or serous and mucinous.
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