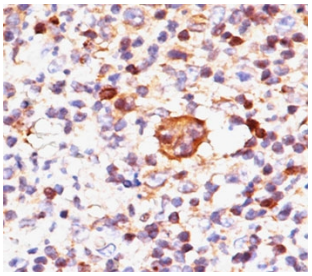
Bax Antibody / Apoptosis Regulator Antibody [clone 2D2] (V2005)

Catalog No.	Formulation	Size
V2005-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2005-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2005SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2005IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

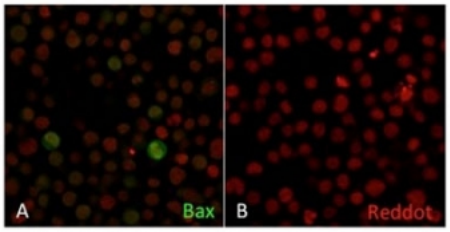
Citations (22)

Bulk quote request

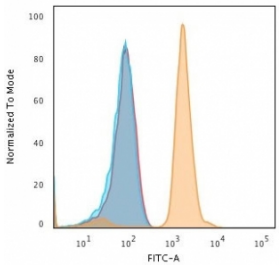
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	2D2
Purity	Protein G affinity chromatography
Gene ID	581
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Bax Antibody / Apoptosis Regulator Antibody is available for research use only.



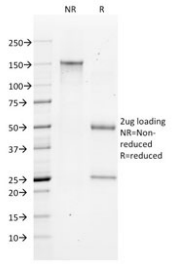
Bax Antibody Human Hodgkin's Lymphoma IHC. Immunohistochemical staining of FFPE human Hodgkin's lymphoma tissue with Bax antibody, clone 2D2. Bax immunoreactivity is detected predominantly within the cytoplasm of Hodgkin and Reed-Sternberg cells and surrounding lymphoid cells, consistent with the expected localization of this apoptosis regulator that promotes mitochondrial outer membrane permeabilization and activation of the intrinsic apoptotic pathway. Cell nuclei are counterstained with hematoxylin (blue).



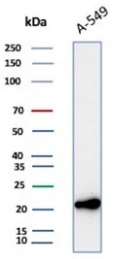
Bax Antibody Jurkat Cell IF. Immunofluorescent staining of fixed human Jurkat cells with Bax antibody, clone 2D2 (green), and NucSpot nuclear stain (red). Bax immunoreactivity is observed predominantly within the cytoplasm, consistent with the expected localization of this apoptosis regulator under basal conditions. Upon activation by cellular stress, Bax undergoes conformational changes and translocates to the mitochondrial outer membrane, where it promotes cytochrome c release and activation of the intrinsic apoptotic pathway.



Bax Antibody Jurkat Cell Flow Cytometry. Flow cytometric analysis of fixed human Jurkat cells stained with Bax antibody, clone 2D2. Gold: isotype control. Blue: Bax antibody. The pronounced rightward shift of the Bax antibody histogram relative to the isotype control demonstrates specific intracellular detection of Bax, a pro-apoptotic apoptosis regulator that promotes mitochondrial outer membrane permeabilization and activation of the intrinsic apoptotic pathway following cellular stress.



SDS-PAGE analysis of purified, BSA-free Bax antibody (clone 2D2) as confirmation of integrity and purity.



Bax Antibody A549 Cell WB. Western blot testing of human A549 cell lysate with Bax antibody, clone 2D2. A distinct immunoreactive band is detected at approximately 21 kDa, consistent with the predicted molecular weight of Bax. The results demonstrate specific detection of this apoptosis regulator, a pro-apoptotic member of the BCL2 family that promotes mitochondrial outer membrane permeabilization, cytochrome c release, and activation of the intrinsic apoptotic pathway.

Description

Bax Antibody recognizes BCL2 Associated X Protein (Bax), a pro-apoptotic member of the BCL2 protein family that serves as a central regulator of the intrinsic, or mitochondrial, apoptotic pathway. Under normal conditions, Bax is predominantly localized within the cytosol as an inactive monomer. In response to cellular stress, DNA damage, oxidative injury, oncogene activation, or growth factor withdrawal, Bax undergoes conformational activation and translocates to the mitochondrial outer membrane, where it oligomerizes to promote membrane permeabilization. This process triggers the release of cytochrome c and other apoptogenic factors, leading to caspase activation and programmed cell death. Consequently, Bax Antibody is widely used to investigate apoptosis, mitochondrial biology, cancer, neurodegeneration, and therapeutic responses.

Bax functions in close coordination with other BCL2 family members to determine cellular fate. Anti-apoptotic proteins such as BCL2 and BCL-XL inhibit Bax activation, whereas BH3-only proteins including BID, BIM, and PUMA promote its conformational change and mitochondrial translocation. The balance between these pro- and anti-apoptotic regulators governs mitochondrial integrity and cell survival. Because Bax occupies a pivotal position within this signaling network, Bax Antibody has become an indispensable research tool for studies of apoptosis, chemotherapy sensitivity, radiation responses, ischemic injury, and developmental biology.

Altered Bax expression or activity has been implicated in numerous diseases, including leukemia, lymphoma, breast cancer, colorectal cancer, lung cancer, prostate cancer, hepatocellular carcinoma, Alzheimer's disease, Parkinson's disease, myocardial infarction, stroke, and autoimmune disorders. Reduced Bax activity may allow damaged cells to evade apoptosis and promote tumor progression, whereas excessive Bax activation contributes to inappropriate cell loss during neurodegeneration and tissue injury. Bax is therefore widely investigated as both a prognostic biomarker and a potential therapeutic target, particularly in combination with emerging BH3 mimetics and other apoptosis-modulating agents.

This mouse monoclonal antibody, clone 2D2, has been cited in more than 100 peer-reviewed scientific publications, demonstrating its widespread acceptance and reliability within the research community. NSJ Bioreagents offers this highly validated Bax Antibody for dependable detection of endogenous Bax in human and animal samples. It provides excellent performance across western blotting, immunohistochemistry, immunofluorescence, flow cytometry, immunoprecipitation, and related applications supporting studies of apoptosis, mitochondrial signaling, cancer biology, and cell death mechanisms.

Learn more about proteins that regulate programmed cell death, mitochondrial apoptosis and cell survival on our Apoptosis Antibodies page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Bax Antibody / Apoptosis Regulator Antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 1mM EDTA buffer, pH 7.5-8.5, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Amino acids GSGEQPRGGGPTSS (3-16) were used as the immunogen for this anti-human Bax antibody.

Storage

Store the Bax antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

BCL2 associated XBCL2 Associated X Protein antibody, BCL2 Like 4 antibody, BCL2L4 antibody, Bax antibody, BAX Protein antibody, BCL2 Associated X antibody

References (3)

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