abcam

ab13654

Anti-Noxa antibody [114C307]

Anti-Noxa antibody [114C307] (ab13654) is a mouse monoclonal antibody detecting Noxa in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human, Mouse**.

- Over 90 publications
- Trusted since 2004

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Protein within Human PMAIP1. The exact immunogen used to generate this antibody is proprietary information. Database link Q13794
Clone number	114C307
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1-2 µg/mL

Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	5 µg/mL
Notes	Bouin-fixed.

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1 µg/cells for 6 µg/cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information PMAIP1

Function	Promotes activation of caspases and apoptosis. Promotes mitochondrial membrane changes and efflux of apoptogenic proteins from the mitochondria. Contributes to p53/TP53-dependent apoptosis after radiation exposure. Promotes proteasomal degradation of MCL1. Competes with BAK1 for binding to MCL1 and can displace BAK1 from its binding site on MCL1 (By similarity). Competes with BIM/BCL2L11 for binding to MCL1 and can displace BIM/BCL2L11 from its binding site on MCL1.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Noxa antibody [114C307] (ab13654) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P) in Human, Mouse samples.

Trusted by the scientific community
Anti-Noxa [114C307] (ab13654) was first used in a scientific publication in 2004 and has been cited over 90 times in peer-reviewed journals.

Reviewed by scientists
Anti-Noxa [114C307] (ab13654) has over 5 independent reviews from customers.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Noxa also known as PMAIP1 is a pro-apoptotic member of the Bcl-2 protein family. It has a molecular weight of approximately 20 kDa. Noxa commonly expresses in a number of tissues including lymphoid and myeloid lineages. It functions by interacting with other Bcl-2 family proteins like Mcl-1 promoting apoptosis through binding and neutralization of anti-apoptotic proteins. This interaction facilitates the release of cytochrome c from the mitochondria triggering caspase activation and subsequent apoptosis.
Biological function summary	Noxa plays a role in the regulation of programmed cell death including being part of multiprotein complexes within the mitochondria. Noxa's expression is upregulated in response to various cellular stress signals. These stresses include DNA damage and hypoxia where it acts to mediate apoptosis preventing the survival of cells with potential mutations. Its role in modulating apoptosis makes it key in maintaining cellular homeostasis.
Pathways	Noxa is involved in significant apoptotic and cellular stress response pathways. It forms part of the intrinsic apoptosis pathway which is tightly regulated by Bcl-2 family members like BAK and BAX. Noxa's ability to neutralize Mcl-1 allows the activation of these proteins committing the cell to apoptosis. It also participates in the p53 signaling pathway which is important for the cellular response to DNA damage wherein p53 directly transactivates Noxa.
Associated diseases and disorders	Noxa is important in cancer and autoimmune syndromes. In cancer its expression often correlates with the sensitivity of cancer cells to chemotherapy as its role in apoptosis can enhance the elimination of cancerous cells. Mutations in p53 that impair its function can lead to decreased Noxa expression and apoptosis contributing to cancer progression. In autoimmune disorders aberrant regulation of apoptosis sometimes involving Noxa and its interaction with Bcl-2 proteins can result in premature cell death or survival of autoreactive cells exacerbating the disease.

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

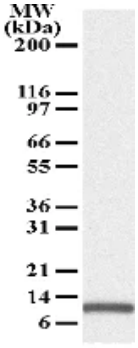
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

4 product images



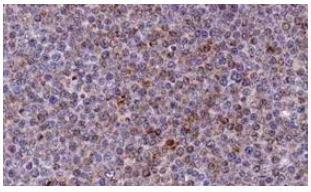
Western blot - Anti-Noxa antibody [114C307] (ab13654)

Noxa Western blot staining using mouse Anti-Noxa antibody

Western blot detection of Noxa in RL-7 cell (a follicular lymphoma) lysate. A protein of approximate molecular weight of 11 kDa is detected using ab13654 at 2 µg/ml.

Western blot detection of Noxa in RL-7 cell (a follicular lymphoma) lysate. A protein of approximate molecular weight of 11 kDa is detected using ab13654 at 2 µg/ml.
All lanes:
Western blot - Anti-Noxa antibody [114C307] (ab13654)

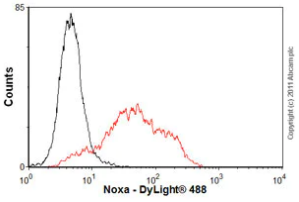
Predicted band size: 6 kDa



Immunohistochemistry paraffin embedded sections - Anti-Noxa antibody [114C307] (ab13654)

Noxa Immunohistochemistry paraffin embedded sections staining using mouse Anti-Noxa antibody

Bouin-fixed, paraffin-embedded human tonsil tissue stained for Chronic Lymphocytic Leukemia (CLL) xenograft tissue stained for Noxa using ab13654 at 1/2000 dilution in immunohistochemical analysis.



Flow Cytometry (Intracellular) - Anti-Noxa antibody [114C307] (ab13654)

Noxa Flow Cytometry (Intracellular) staining using mouse Anti-Noxa antibody

Overlay histogram showing Jurkat cells stained with ab13654 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab13654, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 80% methanol/permeabilized in 0.1% PBS-Tween used under the same conditions.

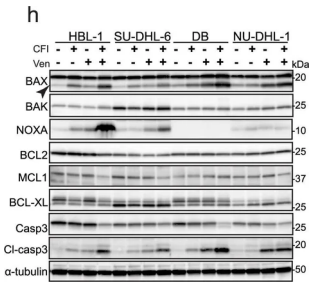


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Western blot - Anti-Noxa antibody [114C307] (ab13654)

Noxa Western blot staining using mouse Anti-Noxa antibody

Western Blotting using Anti-Noxa antibody [114C307], ab13654. Publication image from Portelinha, A. et al., 2023, Nat Commun, 36934096. Legend direct from paper.

The BCL-2 inhibitor venetoclax synergizes with PLK4 inhibition and eliminates polyploid cells.a Heatmap representing the percentage of cell viability values for the CFI-resistant cell lines in response to CFI and venetoclax combined treatment for 72 h, as assessed by CellTiter-Glo assay. Cell viability values are represented in a heatmap colored from red (0% inhibition) or blue to white (50–100% inhibition). Values represent the average of three independent dose-titration curves (n = 3). b Representative confocal c quantification of OCI-Ly19 cells treated with CFI (25 nM), Venetoclax (25 nM), or a combination of both treatments for 72 h treatment. Cells were fixed and stained for pericentrin. Insets are 4X magnified. Scale bar, 3 µm. A minimum of three z-stack images were captured under the same condition. d Representative cell cycle analysis after PI staining of HBL-1, Daudi, and SU-DHL-6 cell lines after 72 h treatment of CFI (50 nM), venetoclax (50 nM), or combination (50 nM of each drug). e Quantification of cells at different stages of the cell cycle shows CFI-generated polyploid cells are eliminated in cell lines with high synergy between CFI and venetoclax. Data were presented as mean ± SD, n = 3. f Representative DNA histograms for cell cycle analysis of HBL-1 after 72 h treatment of Dihydrocytochalasin B (DCB) (1.5 µM), venetoclax (50 nM), or combination of both drugs. g Stacked bar graph showing the percentage of cells at various stages of the cell cycle in HBL-1 treated with DCB or venetoclax alone or with a combination of both drugs. Data were presented as mean ± SD, n = 2. h Western blot analysis of BCL-2 family proteins levels 72 h following combinational treatment with indicated drugs. Representative western blots from one of three experiments performed.α-tubulin is shown to indicate equivalence of loading. Ven Venetoclax, Combo combination of CFI and Venetoclax. Source data for panels a, c, e, g, h are provided as a Source Data file.

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