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Datasheet for 200-301-H98

NOXA Antibody

Overview

Description:	Anti-NOXA (MOUSE) Monoclonal Antibody - 200-301-H98
Item No.:	200-301-H98
Size:	100 µg
Applications:	FC, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Mouse

Product Details

Background:	Anti-Noxa antibody detects human Noxa. Recently, a BH-3 only member of the Bcl-2 family have been identified in human and mouse and designated as Noxa (for damage). The expression of the Noxa gene involves direct activation of its promoter by p53. Increased expression of Noxa protein occurs in normal thymocytes but not in p53-deficient thymocytes. Noxa cDNA codes for a 103-amino acid protein. The coimmunoprecipitation data suggest that Noxa protein may interact with proteins belonging to the Bcl-2 family, such as, Bcl-XL and Mcl-1. Oda et al. have also shown that blocking the endogenous Noxa induction results in the suppression of apoptosis. Treatment of cells with Noxa antisense oligonucleotides blocks radiation-induced apoptosis suggesting that Noxa may represent a mediator of p53-dependent apoptosis. Anti-Noxa antibody is ideal for investigators involved in apoptosis research.
Synonyms:	NOXA, Phorbol-12-myristate-13-acetate-induced protein 1, PMA-induced protein 1, Immediate-early-response protein APR, Protein Noxa
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	114C307.1
Format:	IgG1

Target Details

Gene Name:	PMAIP1
Reactivity:	Human, Mouse

Immunogen Type:	Recombinant Protein
Immunogen:	Noxa Antibody was produced in mice prepared by repeated immunizations with the human protein Noxa.
Purity/Specificity:	Anti-Noxa Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with Anti-Noxa from human and mouse based on 100% homology with the immunizing sequence. Cross-reactivity with Anti-Noxa from other sources has not been determined.
Relevant Links:	• UniProtKB - Q13794 • NCBI - NP_066950.1 • GeneID - 5366

Application Details

Tested Applications:	FC, IF, IHC, WB
Application Note:	Anti-Noxa antibody is tested for use by WB, Flow, ICC/IF, IHC, and IHC-P. Expect a band approximately 6 kDa on specific lysates. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IHC:	5 µg/mL
WB:	1-2 µg/mL

Formulation

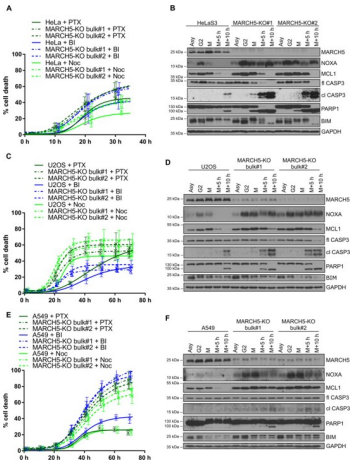
Physical State:	Liquid
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide

Shipping & Handling

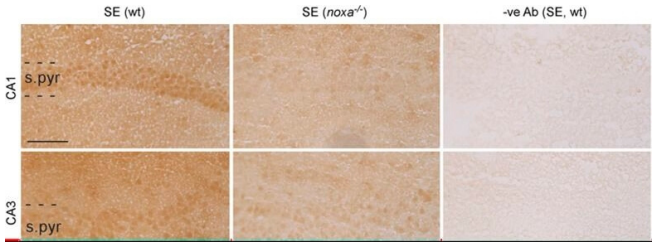
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

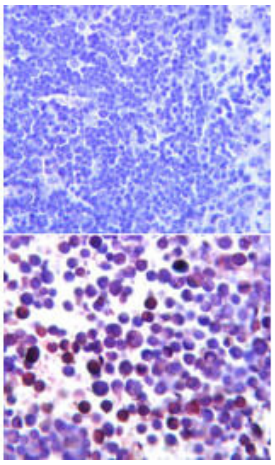
Images



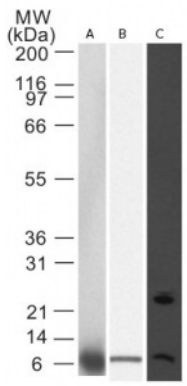
Western Blot
Lack of MARCH5 sensitizes to cell death during mitotic arrest where MCL1 and NOXA are stabilized.
(a) Parental HeLaS3 and two HeLaS3 MARCH5-KO bulks generated with two different small guide RNAs were treated with paclitaxel (PTX), nocodazole (Noc), or BI2536 (BI) immediately followed by live cell imaging. Addition of propidium iodide to the medium allowed the automated assessment of dead cells using the IncuCyte software. A nonlinear regression curve of the percentage of dead cells in relation to the total number of cells present at the beginning of the imaging of four independent experiments is shown. The mean and s.d. of exemplary data points are also shown.
(b) Parental HeLaS3 and two independent HeLaS3 MARCH5-KO clones were either left asynchronous (Asy) or synchronized by double thymidine block, released into paclitaxel and harvested at the respective time points. Samples were then prepared for immunoblot analysis. For caspase-3 the full length (fl) and cleaved (cl) form is shown.
(c) Same as in a). Three independent experiments with U2OS cells and two U2OS MARCH5-KO bulks generated with two different small guide RNAs.
(d) Same as in b) with U2OS cells and two U2OS MARCH5-KO bulks generated with two different small guide RNAs.
(e) Same as in a). Three independent experiments with A549 cells and two A549 MARCH5-KO bulks generated with two different small guide RNAs.
(f) Same as in b) with A549 cells and two A549 MARCH5-KO bulks generated with two different small guide RNAs.
Fig 2. PMID: 32015503



Immunohistochemistry
Noxa immunostaining in seizure-damaged hippocampi from wt and Noxa-deficient mice. Representative photomicrographs showing Noxa immunostaining in the main hippocampal subfields 24 h after SE. Noxa immunoreactivity is mainly confined to neuronal populations in wt mice (SE (wt)). There was minimal Noxa immunoreactivity in mice lacking noxa (SE (noxa−/−)). Noxa immunoreactivity was completely eliminated in tissue sections from wt mice in which the primary antibody was omitted (−Ab (SE, wt)). Scale bar, 100 µm. s.pyr, stratum pyramidale; gcl, granule cell layer Figure provided by CiteAb. Source: Cell Death Dis, PMID: 28079889.



Immunohistochemistry
Immunohistochemistry of mouse Anti-Noxa antibody. Tissue A: Human Rhabdomyosaroma. Tissue B: Human Lymphoma. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Noxa antibody at 5 µg/ml for 1 h at RT. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: Noxa is subcellularly located in the mitochondrion. Staining: Noxa is stained by a hematoxylin purple nuclear counterstain.



Western Blot
Western Blot of Mouse Anti-Noxa antibody. Lane A: 293 calls transfected with human Noxa. Lane B: RL-7 cell. Lane C: T98G lysate. Primary antibody: Noxa antibody at 2 µg/mL for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 80 kDa for Livin BIRC7 KIAP . Other band(s): none.

References

- Haschka, M.D. et al. MARCH5-dependent degradation of MCL1/NOXA complexes defines susceptibility to antimitotic drug treatment. *Cell Death Differ* (2020)
- Ichikawa et al. Deletion of the BH3-only protein Noxa alters electrographic seizures but does not protect against hippocampal damage after status epilepticus in mice. *Cell Death & Disease* (2017)

Disclaimer

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