SANTA CRUZ BIOTECHNOLOGY, INC.

NOXA (114C307): sc-56169

BACKGROUND

Members of the Bcl-2 family of proteins interact to regulate programmed cell death (apoptosis) under a broad range of physiological conditions. Bcl-2, Bcl-x_L and several related proteins inhibit apoptosis, whereas other members of the Bcl-2 family, such as Bax and Bak, enhance cell death. NOXA, a pro-apoptotic member of the Bcl-2 family, contains the Bcl-2 homology 3 (BH3) region, but does not contain other BH domains. Murine cells constitutively express NOXA mRNA in small amounts in various organs; X-ray irradiation increases NOXA mRNA and protein expression levels. In human cells, NOXA, alternatively designated PMA-induced protein 1 or APR, displays high expression in the adult T cell leukemia cell line IKD, where it may function as an immediate-early-response gene. The NOXA protein selectively localizes to mitochondria.

REFERENCES

1. Nunez, G., et al. 1990. Deregulated Bcl-2 gene expression selectively prolongs survival of growth factor-deprived hemopoietic cell lines. J. Immunol. 144: 3602-3610.
2. Hijikata, M., et al. 1990. Molecular cloning and characterization of a cDNA for a novel phorbol-12-myristate-13-acetate-responsive gene that is highly expressed in an adult T-cell leukemia cell line. J. Virol. 64: 4632-4639.

CHROMOSOMAL LOCATION

Genetic locus: PMAIP1 (human) mapping to 18q21.32; Pmaip1 (mouse) mapping to 18 E1.

SOURCE

NOXA (114C307) is a mouse monoclonal antibody raised against a fusion protein containing NOXA of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NOXA (114C307) is recommended for detection of NOXA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NOXA siRNA (h): sc-37305, NOXA siRNA (m): sc-37306, NOXA shRNA Plasmid (h): sc-37305-SH, NOXA shRNA Plasmid (m): sc-37306-SH, NOXA shRNA (h) Lentiviral Particles: sc-37305-V and NOXA shRNA (m) Lentiviral Particles: sc-37306-V.

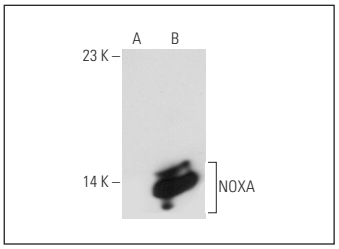
Molecular Weight of NOXA: 15 kDa.

Positive Controls: NOXA (h2): 293T Lysate: sc-117157, RAW 264.7 whole cell lysate: sc-2211 or HuT 78 whole cell lysate: sc-2208.

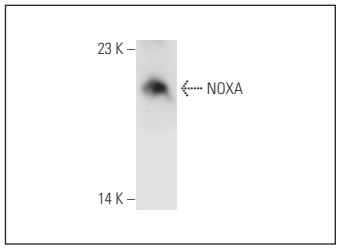
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



NOXA (114C307): sc-56169. Western blot analysis of NOXA expression in non-transfected: sc-117752 (**A**) and human NOXA transfected: sc-117157 (**B**) 293T whole cell lysates.



NOXA (114C307): sc-56169. Western blot analysis of NOXA expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Berges, C., et al. 2009. Proteasome inhibition activates the mitochondrial pathway of apoptosis in human $CD4^+$ T cells. J. Cell. Biochem. 108: 935-946.
2. Ishii, T., et al. 2012. Anti-tumor activity against multiple myeloma by combination of KW-2478, an Hsp90 inhibitor, with bortezomib. Blood Cancer J. 2: e68.
3. Zucker, S.N., et al. 2014. Nrf2 amplifies oxidative stress via induction of Klf9. Mol. Cell 53: 916-928.
4. Chen, Y., et al. 2014. Regulation of neuronal gene expression and survival by basal NMDA receptor activity: a role for histone deacetylase 4. J. Neurosci. 34: 15327-15339.
5. Jagadish, N., et al. 2016. Sperm-associated antigen 9 (SPAG9) promotes the survival and tumor growth of triple-negative breast cancer cells. Tumour Biol. 37: 13101-13110.
6. Twardziok, M., et al. 2016. Multiple active compounds from *Viscum album L.* synergistically converge to promote apoptosis in ewing carcoma. PLoS ONE 11: e0159749.
7. Zhang, J., et al. 2016. Bax/Bak activation in the absence of Bid, Bim, Puma, and p53. Cell Death Dis. 7: e2266.
8. O'Neill, K.L., et al. 2016. Inactivation of prosurvival Bcl-2 proteins activates Bax/Bak through the outer mitochondrial membrane. Genes Dev. 30: 973-988.
9. Bajpai, R., et al. 2016. Targeting glutamine metabolism in multiple myeloma enhances BIM binding to Bcl-2 eliciting synthetic lethality to venetoclax. Oncogene 35: 3955-3964.
10. Kumar, V., et al. 2017. Role of A-kinase anchor protein (AKAP4) in growth and survival of ovarian cancer cells. Oncotarget 8: 53124-53136.

RESEARCH USE

For research use only, not for use in diagnostic procedures.