



NOXA (4H214): sc-71722

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-xL 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.
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3. Hockenbery, D.M., et al. 1991. Bcl-2 protein is topographically restricted in tissues characterized by apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 88: 6961-6965.
4. Oltvai, Z.N., et al. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
5. Chittenden, T., et al. 1995. Induction of apoptosis by the Bcl-2 homologue Bak. *Nature* 374: 733-736.
6. Kiefer, M.C., et al. 1995. Modulation of apoptosis by the widely distributed Bcl-2 homologue Bak. *Nature* 374: 736-739.
7. Adams, J.M., et al. 1998. The Bcl-2 protein family: arbiters of cell survival. *Science* 281: 1322-1326.
8. Oda, E., et al. 2000. NOXA, a BH3-only member of the Bcl-2 family and candidate mediator of p53-induced apoptosis. *Science* 288: 1053-1058.
9. Voortman, J., et al. 2007. Bortezomib, but not cisplatin, induces mitochondria-dependent apoptosis accompanied by upregulation of NOXA in the non-small cell lung cancer cell line NCI-H460. *Mol. Cancer Ther.* 6: 1046-1053.

CHROMOSOMAL LOCATION

Genetic locus: PMAIP1 (human) mapping to 18q21.32.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

NOXA (4H214) is a mouse monoclonal antibody raised against a fusion protein containing NOXA of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NOXA (4H214) is recommended for detection of NOXA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NOXA siRNA (h): sc-37305.

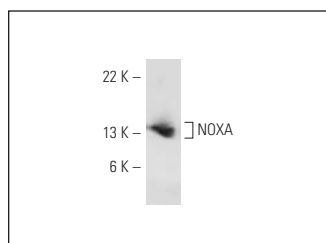
Molecular Weight of NOXA: 15 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, U-937 cell lysate: sc-2239 or HuT 78 whole cell lysate: sc-2208.

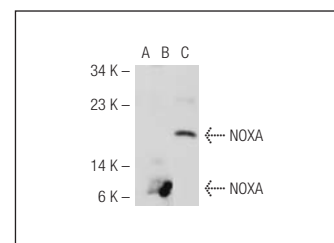
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



NOXA (4H214): sc-71722. Western blot analysis of NOXA expression in U-698-M whole cell lysate.



NOXA (4H214): sc-71722. Western blot analysis of NOXA expression in non-transfected 293T: sc-117752 (A) and human NOXA transfected 293T: sc-117157 (B) and RAW 264.7 (C) whole cell lysates.

RESEARCH USE

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