

NOXA (K-16): sc-11719

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.
3. Hockenbery, D.M., et al. 1991. BCL2 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.

CHROMOSOMAL LOCATION

Genetic locus: Pmaip1 (mouse) mapping to 18 E1.

SOURCE

NOXA (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NOXA of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11719 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NOXA (K-16) is recommended for detection of NOXA of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Hershko, T., et al. 2004. Up-regulation of Bcl-2 homology 3 (BH3)-only proteins by E2F-1 mediates apoptosis. *J. Biol. Chem.* 279: 8627-8634.
2. Solozobova, V., et al. 2009. Nuclear accumulation and activation of p53 in embryonic stem cells after DNA damage. *BMC Cell Biol.* 10: 46.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **NOXA (114C307): sc-56169**, our highly recommended monoclonal alternative to NOXA (K-16).