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Noxa Antibody

Catalog # ASC10137

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9JM54
Other Accession	NP_067426, 10946832
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	11566
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Noxa antibody can be used for detection of Noxa by Western blot at at 0.5 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 1 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	58801
Other Names	Noxa Antibody: Noxa, Phorbol-12-myristate-13-acetate-induced protein 1, phorbol-12-myristate-13-acetate-induced protein 1
Target/Specificity	Pmaip1;
Reconstitution & Storage	Noxa antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Noxa Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Pmaip1
Synonyms	Noxa
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 BIM/BCL2L11 for binding to MCL1 and can displace BIM/BCL2L11 from its binding site on MCL1 (By similarity). Competes with BAK1 for binding to MCL1 and can displace BAK1 from its binding site on MCL1.

Cellular Location	Mitochondrion.
Tissue Location	Detected in thymocytes after irradiation with X- rays. Not detectable in untreated thymocytes (at protein level) Detected in embryonic neural precursor cells of the telencephalon Constitutively expressed at low levels in adult brain, testis, thymus, spleen, lung and kidney.

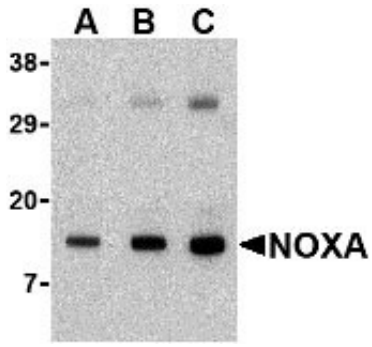
Background

Noxa Antibody: Apoptosis is related to many diseases and development. The p53 tumor-suppressor protein induces apoptosis through transcriptional activation of several genes including p53R2, p53AIP1, and PUMA. A new p53 target gene, Noxa, was recently identified, which encodes a protein belonging to the subfamily of BH3-only proapoptic proteins. Noxa and PUMA are both transcriptional targets of p53 and BH3-only proteins. X-ray irradiation increased p53-dependent Noxa mRNA and protein levels. Noxa, when ectopically expressed, interacted with anti-apoptotic Bcl-2 family members, resulting in the activation of caspase-9. Noxa, like PUMA, localized to mitochondria and induces apoptosis in response to p53. Noxa and PUMA may represent direct mediators of p53-induced apoptosis. Increased levels of p53 and its target gene Noxa was found in the impaired tumor development.

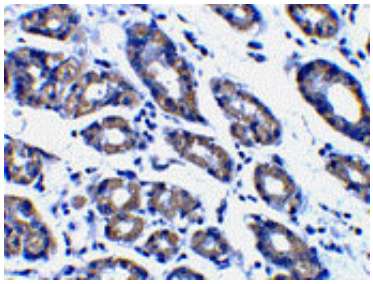
References

Oda E, Ohki R, Murasawa H, et al. Noxa, a BH3-only member of the Bcl-2 family and candidate mediator of p53-induced apoptosis. Science 2000; 288:1053-8.
Nakano K and Vousden KH. PUMA, a novel proapoptotic gene, is induced by p53. Mol. Cell 2001; 7:683-94.
Yu J, Zhang L, Hwang PM, et al. PUMA induces the rapid apoptosis of colorectal cancer cells. Mol. Cell 2001; 7:673-82.
Eferl R, Ricci R, Kenner L, et al. Liver tumor development. c-Jun antagonizes the proapoptotic activity of p53. Cell 2003; 112:181-92.

Images

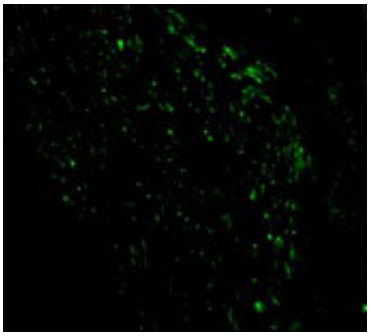


Western blot analysis of Noxa in human stomach tissue lysate with Noxa antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemistry of Noxa in human stomach tissue with Noxa antibody at 1 µg/mL.

Immunofluorescence of Noxa in Human Stomach cells with Noxa antibody at 10 µg/mL.



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