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Puma BH3 Domain Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1317a

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	Q9BXH1
Other Accession	Q80ZG6, Q99ML1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	20532
Antigen Region	119-154

Additional Information

Gene ID	27113
Other Names	Bcl-2-binding component 3, JFY-1, p53 up-regulated modulator of apoptosis, BBC3, PUMA
Target/Specificity	This Puma BH3 Domain antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 119-154 amino acids from human Puma BH3 Domain.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Puma BH3 Domain Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BBC3
Synonyms	PUMA

Function	Essential mediator of p53/TP53-dependent and p53/TP53- independent apoptosis (PubMed:11463391, PubMed:23340338). Promotes partial unfolding of BCL2L1 and dissociation of BCL2L1 from p53/TP53, releasing the bound p53/TP53 to induce apoptosis (PubMed:23340338). Regulates ER stress-induced neuronal apoptosis (By similarity).
Cellular Location	Mitochondrion Note=Localized to the mitochondria in order to induce cytochrome c release
Tissue Location	Ubiquitously expressed.

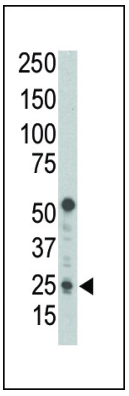
Background

PUMA is one of the pro-apoptotic Bcl-2 family members including Bax and Noxa, which are also transcriptional targets of p53. The PUMA gene encodes two BH3 domain-containing proteins termed PUMA-a and PUMA-b. PUMA proteins bind Bcl-2, localize to the mitochondria, and induce cytochrome c release and apoptosis in response to p53. PUMA may be a direct mediator of p53-induced apoptosis.

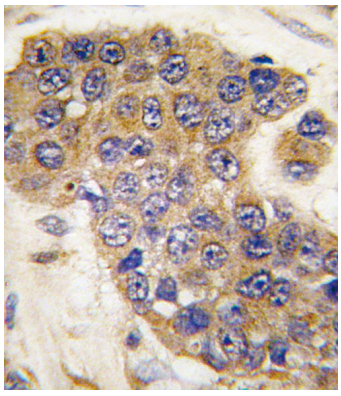
References

Liu, F.T., et al., Biochem. Biophys. Res. Commun. 310(3):956-962 (2003). Hoque, M.O., et al., Cancer Lett. 199(1):75-81 (2003). Yu, J., et al., Proc. Natl. Acad. Sci. U.S.A. 100(4):1931-1936 (2003). Han, J., et al., Proc. Natl. Acad. Sci. U.S.A. 98(20):11318-11323 (2001). Nakano, K., et al., Mol. Cell 7(3):683-694 (2001).

Images

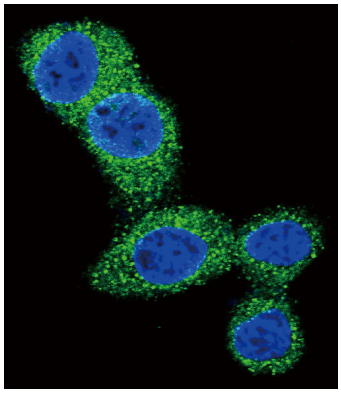


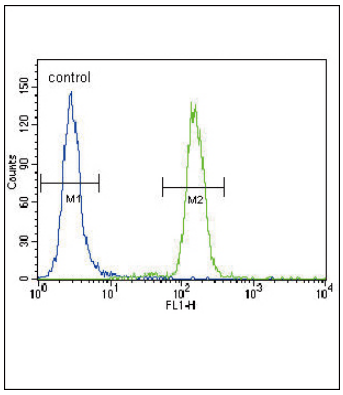
Western blot analysis of anti-Puma BH3 domain Pab (Cat. #AP1317a) in HL-60 cell lysate. Puma BH3 domain (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with Puma BH3 Domain antibody (Cat.#AP1317a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Confocal immunofluorescent analysis of Puma BH3 Domain Antibody(Cat#AP1317a) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).





Puma BH3 Domain Antibody (Cat. #AP1317a) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Detection of Bim and Puma in mouse hair follicles using immunofluorescence and TUNEL assay double staining.