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PUMA Antibody [10D4G7]

Catalog # ASC11982

Product Information

Application	WB, E
Primary Accession	Q9BXH1
Other Accession	Q9BXH1, 56748610
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	10D4G7
Calculated MW	20532
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PUMA antibody can be used for detection of PUMA by Western blot at 2.5 to 5 g/mL.

Additional Information

Gene ID	27113
Other Names	Bcl-2-binding component 3, JFY-1, p53 up-regulated modulator of apoptosis, BBC3, PUMA
Target/Specificity	BBC3;
Reconstitution & Storage	PUMA monoclonal antibody can be stored at -20℃, stable for one year.
Precautions	PUMA Antibody [10D4G7] 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.

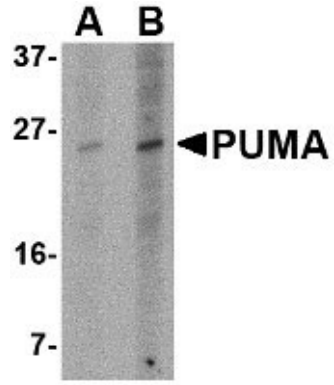
Background

PUMA Monoclonal Antibody: Apoptosis is related to many diseases and development. The p53 tumor-suppressor protein induces apoptosis through transcriptional activation of several genes. A novel p53 inducible pro-apoptotic gene was identified recently and designated PUMA (for p53 upregulated modulator of apoptosis) and bbc3 (for Bcl-2 binding component 3) in human and mouse. PUMA/bbc3 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 PUMAα and PUMAβ. 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

Nakano K, Vousden KH. PUMA, a novel proapoptotic gene, is induced by p53. Mol Cell. 2001; 7:683-94.
Yu J, Zhang L, Hwang PM, Kinzler KW, Vogelstein B. PUMA induces the rapid apoptosis of colorectal cancer cells. Mol Cell. 2001; 7:673-82.
Han J, Flemington C, Houghton AB, Gu Z, Zambetti GP, Lutz RJ, Zhu L, Chittenden T. Expression of bbc3, a pro-apoptotic BH3-only gene, is regulated by diverse cell death and survival signals. Proc Natl Acad Sci U S A. 2001; 98:11318-23.

Images



Western blot analysis of PUMA expression in K562 cell lysate with PUMA antibody at (A) 2.5 and (B) 5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.