

Datasheet for 600-401-987**PUMA Antibody****Overview**

Description:	Anti-PUMA (p53 Upregulated Modulator of Apoptosis) (RABBIT) Antibody - 600-401-987
Item No.:	600-401-987
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	Apoptosis is related to development as well as to many diseases. 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 (1-3). PUMA/bbc3 is one of the pro-apoptotic Bcl-2 family members. This family of proteins also includes Bax and Noxa, which are also transcriptional targets of p53. The PUMA gene encodes two BH3 domain-containing proteins termed PUMA-α and PUMA-β (1). 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. Anti-PUMA antibody is ideal for investigators involved in Apoptosis research.
Synonyms:	BCL2 binding component 3 antibody, JFY 1 antibody, JFY1 antibody, p53 up regulated modulator of apoptosis antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	BBC3
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide

Immunogen:	PUMA Antibody was produced from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to amino acids near the c-terminus of human PUMA-a. This sequence is identical between a and b forms of the PUMA proteins.
Purity/Specificity:	Anti-PUMA Antibody was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with PUMA with Human and Mouse based on 100% homology with the immunizing sequence. Cross-reactivity with PUMA from other sources has not been determined.
Relevant Links:	• NCBI - NP_001120712.1 • UniProtKB - Q9BXH1 • GeneID - 27113

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-PUMA antibody has been tested for use in ELISA, Western Blotting, IF, and immunocytochemistry. K562 or 3T3 cell lysates can be used as positive controls in western blotting, and a band at approximately 23 kDa can be detected. A lower band at approximately 16 kDa was detected in MOLT4 and U937 cell lysates, which may represent the PUMA-b form. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	User Optimized
IF:	2 µg/mL
WB:	1-2 µg/ml

Formulation

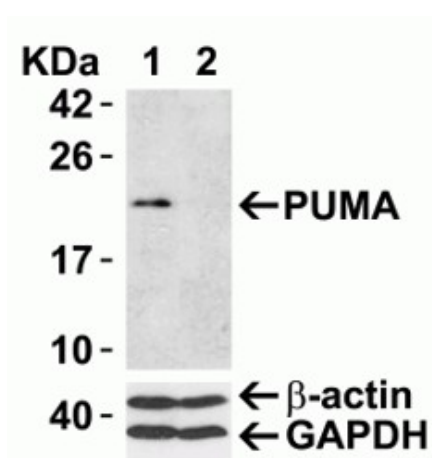
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Wet Ice
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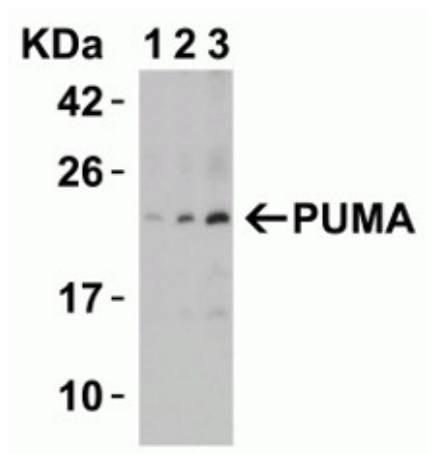
Storage Condition:	Store vial at 2° - 8° C or below prior to opening. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



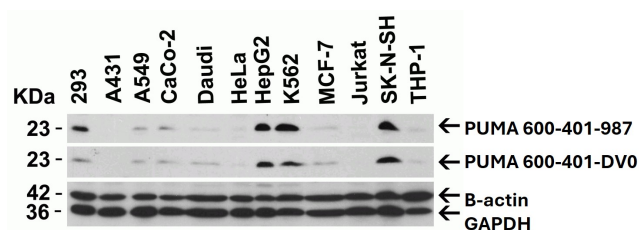
Western Blot

Validation with PUMA siRNA Knockdown in 293 Cells. Loading: 15 µg of 293 whole cell lysates per lane. 293 cells were transfected with control siRNAs (lane 1) or PUMA siRNAs (lane 2). Antibodies: (2 µg/mL), beta-actin (1 µg/mL) and GAPDH (0.02 µg/mL), 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot

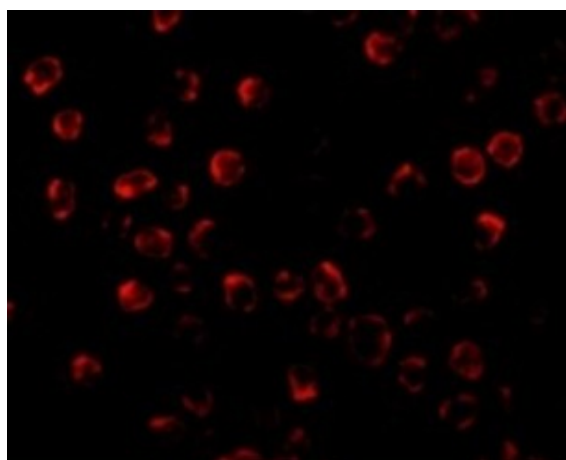
Sensitivity Test for PUMA in 293 Cells. Loading: Lysates at 15 µg per lane. Antibodies: (lane 1-3: 1, 2 and 4 µg/mL). 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot

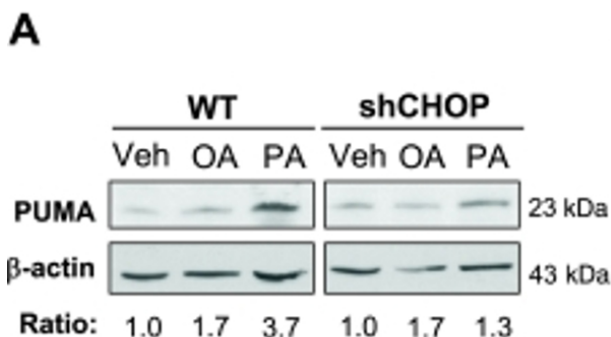
Western Blot using PUMA. Loading: 20 µg of lysates per lane.

Antibodies: 600-401-987 (3 µg/mL), 600-401-DV0 (2 µg/mL), beta-actin (1 µg/mL) and GAPDH (0.02 µg/mL), 1 h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



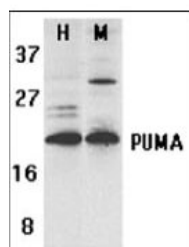
Immunofluorescence Microscopy

Immunofluorescence Validation of PUMA in K562 Cells. Immunofluorescent analysis of 4% paraformaldehyde-fixed K562 cells labeling PUMA at 2 µg/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red). Image showing cytosolic staining on K562 cells.



Western Blot

CHOP knockdown decreased palmitate-mediated increase in PUMA (p53 upregulated modulator of apoptosis) protein levels and Bax activation. A) WT Huh-7 and shCHOP Huh-7 were incubated with palmitic acid and oleic acid at 800 µM. Vehicle-treated cells were used as control. Whole cell lysates were prepared 16 h after treatments, and immunoblot analysis was performed for PUMA protein expression. β-Actin was used as a control for protein loading. PUMA/β-actin ratio was calculated by densitometry and normalized to vehicle-treated cells. Fig 2. PMID: 20430872



Western Blot

Western blot analysis of PUMA expression in human (H) K562 and mouse (M) 3T3 cell lysates with PUMA antibody at 2 µg/ml.



Immunohistochemistry

Immunocytochemistry of PUMA in K562 cells with PUMA antibody at 1 µg/ml.

References

- Cazanave SC et al. CHOP and AP-1 cooperatively mediate PUMA expression during lipoapoptosis. *Am J Physiol Gastrointest Liver Physiol*. (2010)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.