




Product datasheet

Anti-PUMA antibody ab9645

★★★★★ [1 Abreviews](#) [11 References](#) [5 Images](#)

Overview

Product name	Anti-PUMA antibody
Description	Rabbit polyclonal to PUMA
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic peptide: ARARQEGSSPEPVEG , corresponding to amino acids 2-16 of Human PUMA. (Peptide available as ab9646).  Run BLAST with  Run BLAST with
Positive control	WB: K562 lysate IHC-P: Human breast carcinoma sections ICC/IF: K562 cells
General notes	

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 (1-3). 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 PUMA-a and PUMA-b (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.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.2 Preservative: 0.02% Sodium azide
Purity	Immunogen affinity purified
Primary antibody notes	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 (1-3). 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 PUMA-a and PUMA-b (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.
Clonality	Polyclonal
Isotype	IgG

Applications

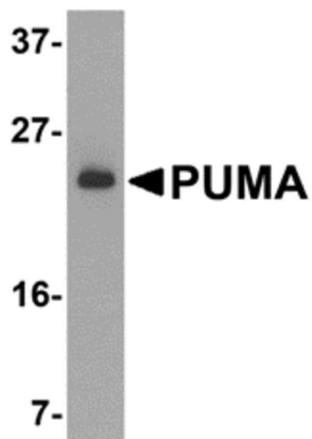
The Abpromise guarantee Our [**Abpromise guarantee**](#) covers the use of ab9645 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	Use a concentration of 2 - 4 µg/ml. Detects a band of approximately 23 kDa.
ICC/IF		Use a concentration of 20 µg/ml.
IHC-P		Use a concentration of 10 µg/ml.

Target

Function	Essential mediator of p53-dependent and p53-independent apoptosis.
Tissue specificity	Ubiquitously expressed.
Sequence similarities	Belongs to the Bcl-2 family.
Cellular localization	Mitochondrion. Localized to the mitochondria in order to induce cytochrome c release.

Images



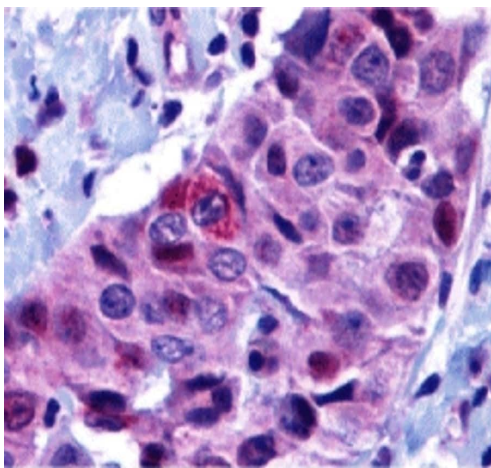
Western blot - Anti-PUMA antibody (ab9645)

Anti-PUMA antibody (ab9645) at 2 µg/ml + K562 cell lysates at 15 µg

Secondary

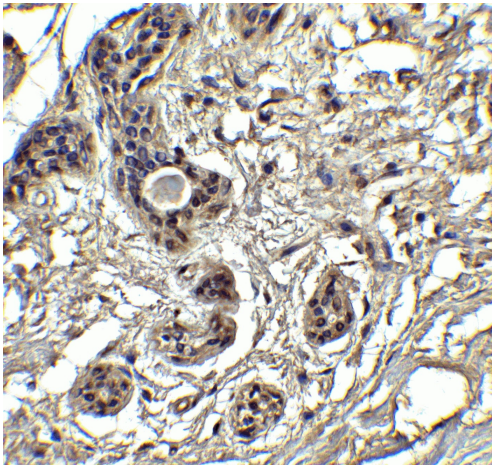
Goat anti-rabbit IgG HRP conjugate at 1/10000 dilution

Primary incubation: 1 hour at room temperature in 5% NFDM/TBST.



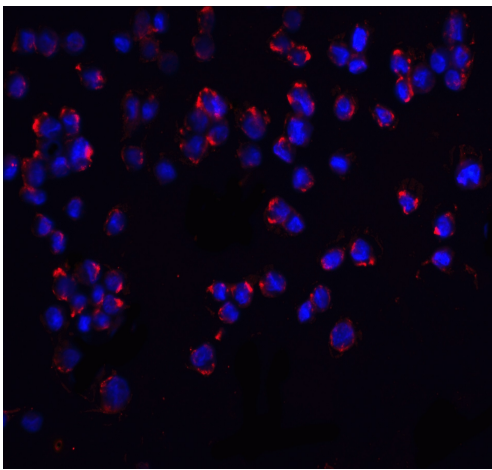
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PUMA antibody (ab9645)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue labeling PUMA with ab9645 at 10 µg/mL. Sections were fixed with formaldehyde and blocked with 10% serum for 1 hour at room temperature. Antigen retrieval was by heat mediation with a citrate buffer (pH 6.0). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



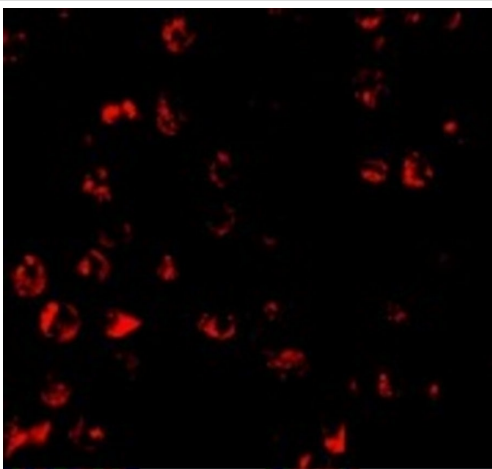
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PUMA antibody (ab9645)

Immunohistochemical analysis of paraffin-embedded human breast tissue labeling PUMA with ab9645 at 2.5 µg/mL. Sections were fixed with formaldehyde and blocked with 10% serum for 1 hour at room temperature. Antigen retrieval was by heat mediation with a citrate buffer (pH 6.0). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunocytochemistry/ Immunofluorescence - Anti-PUMA antibody (ab9645)

Immunofluorescent analysis of 4% paraformaldehydefixed K562 cells labeling PUMA with ab9645 at 20 µg/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red) and DAPI staining (blue).



Immunocytochemistry/ Immunofluorescence - Anti-PUMA antibody (ab9645)

Immunofluorescent analysis of 4% paraformaldehydefixed K562 cells labeling PUMA with ab9645 at 10 µg/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red). Image showing cytosol staining on K562 cells.

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