

Product Information

Anti-PUMA/bbc3, C-Terminal

Developed in Rabbit

Product Number **P 4618**

Product Description

Anti-PUMA/bbc3, C-Terminal is developed in rabbit using a synthetic peptide (PLPRGHRAPEMEPN) corresponding to the C-terminal of human PUMA- α (amino acids 180-193) as immunogen.¹ This sequence is identical between the α and β forms of PUMA. It is purified by immunoaffinity chromatography.

Anti-PUMA/bbc3, C-Terminal recognizes PUMA by immunoblotting using HL60 (human promyelocytic leukemia) and mouse spleen cell lysates. Species reactivity is observed with human and mouse PUMA/bbc3.

The p53 tumor-suppressor protein induces apoptosis through transcriptional activation of several genes. A novel p53 inducible pro-apoptotic gene was identified 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 a pro-apoptotic Bcl-2 family member that is also a transcriptional target of p53. The *PUMA* gene encodes two BH3 domain-containing proteins termed PUMA- α and PUMA- β ¹ that show similar activities. 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.

Reagent

Anti-PUMA/bbc3, C-Terminal is supplied as approximately 1 mg/ml of antiserum in phosphate buffered saline, containing 0.02% sodium azide.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) has been sent to the attention of the safety officer at your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a "frost-free" freezer. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

For immunoblotting, the recommended working antibody concentration is 1-2 µg/ml using human K562 erythroleukemia and mouse 3T3 fibroblast cell lysates. A band of approximately 23 kDa is detected. Using MOLT4 human T cells and U937 myeloid leukemia cells, a lower band at approximately 16 kDa may be detected, which probably represents PUMA- β .

Note: In order to obtain the best results and assay sensitivities in various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Nakano, K., and Vousden, K.H., PUMA, a novel proapoptotic gene, is induced by p53. *Mol. Cell.*, **7**, 683-694 (2001).
2. Yu, J., PUMA induces the rapid apoptosis of colorectal cancer cells. *Mol. Cell.*, **7**, 673-682 (2001).
3. Han, J., et al., Expression of *bbc3*, a pro-apoptotic BH3-only gene, is regulated by diverse cell death and survival signals. *Proc. Natl. Acad. Sci. USA.*, **98**, 11318-11323 (2001).

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