



Polyclonal Anti- p53 upregulated modulator of apoptosis, *PUMA* (Sepharose Bead Conjugate)

Catalogue No. PA1313-S

Lot No. 09B01

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, rat, mouse. No cross reactivity with other proteins.

Recommended application

(Immunoprecipitation(IP))

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human PUMA, identical to the related rat and mouse sequence.

Purification

Immunogen affinity purified.

Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN₃a₃ preservative.

Storage

Store at 4°C for frequent use.

Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

BACKGROUND

The p53 upregulated modulator of apoptosis, or PUMA, is a pro-apoptotic member of the Bcl-2 protein family.^{1, 2} The PUMA gene is located at 19q.3 PUMA transcript is contained within 4 exons, with the presumptive initiation codon in exon 2. The predicted 193-amino acid PUMA protein shares 91% amino acid identity with the murine sequence. Bcl-2 family members can form hetero- or homodimers, and they act as anti- or pro-apoptotic regulators that are involved in a wide variety of cellular activities. The expression of PUMA is regulated by the tumor suppressor p53, and PUMA has been shown to be involved in p53-mediated apoptosis. Additionally, PUMA encodes 2 BH3 domain-containing proteins, PUMA-alpha and PUMA-beta, that are produced through the use of an alternative first exon and are induced in cells following p53 activation.⁴ Furthermore, PUMA couples the nuclear and cytoplasmic proapoptotic functions of p53.⁵

REFERENCE

1. Nakano K, Vousden KH (March 2001). "PUMA, a novel proapoptotic gene, is induced by p53". *Mol. Cell* 7 (3): 683–94.
2. Han J, Flemington C, Houghton AB, Gu Z, Zambetti GP, Lutz RJ, Zhu L, Chittenden T (September 2001). "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.* 98 (20): 11318–23.
3. Yu, J.; Zhang, L.; Hwang, P. M.; Kinzler, K. W.; Vogelstein, B. : PUMA induces the rapid apoptosis of colorectal cancer cells. *Molec. Cell* 7: 673-682, 2001.
4. Nakano, K.; Vousden, K. H. : PUMA, a novel proapoptotic gene, is induced by p53. *Molec. Cell* 7: 683-694, 2001.
5. Chipuk, J. E.; Bouchier-Hayes, L.; Kuwana, T.; Newmeyer, D. D.; Green, D. R. : PUMA couples the nuclear and cytoplasmic proapoptotic function of p53. *Science* 309: 1732-1735, 2005.

For Research Use Only not for diagnostic and clinical use

Contact: Antagene, Inc. | Tel: 1 (866) 964-2589 | Fax: 1 (888) 225-1868 | Email: Info@antageneinc.com