



Product Information Sheet

Polyclonal Anti- Apoptotic peptidase activating factor 1, APAF1 (Magnetic Bead Conjugate)

Catalogue No.	PA1249-M	Immunogen
Lot No.	09G01	A synthetic peptide corresponding to a sequence at the N-terminal of human APAF1, identical to the related rat and mouse sequence.
Ig type:	rabbit IgG1	Purification
		Immunogen affinity purified
Size:	100µg/Vial	Contents
Specificity	Human, rat, mouse.	Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN ₃ .
No cross reactivity with other proteins.	Storage	Store at 4°C for frequent use.
Recommended application	Description:	
<i>Immunoprecipitation(IP)</i>	This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation	

BACKGROUND

Apoptotic peptidase activating factor 1, also known as APAF1, is a protein which in humans is encoded by the *APAF1* gene. This gene is mapped to chromosome 12q23.¹ It encodes a cytoplasmic protein that initiates apoptosis. And it is an essential downstream effector of p53-mediated apoptosis.² This protein contains several copies of the WD40 repeat domain, a caspase recruitment domain (CARD), and an ATPase domain (NB-ARC). In the presence of cytochrome c and dATP, APAF1 assembles into an oligomeric apoptosome, which is responsible for activation of procaspase-9 and maintenance of the enzymatic activity of processed caspase-9.³ Furthermore, APAF1 is inactivated in metastatic melanomas, leading to defects in the execution of apoptotic cell death.⁴ Additionally, APAF1 has been shown to interact with NLRP1,⁵ Caspase-9,^{5, 6, 7, 8, 9, 10} APIP,⁶ BCL2-like 1^{8, 9} and HSPA4.¹⁰

REFERENCE

1. Kim, H.; Jung, Y. K.; Kwon, Y. K.; Park, S. H. : Assignment of apoptotic protease activating factor-1 gene (APAF1) to human chromosome band 12q23 by fluorescence in situ hybridization. *Cytogenet. Cell Genet.* 87: 252-253, 1999.
2. Robles, A. I.; Bemmels, N. A.; Foraker, A. B.; Harris, C. C. : APAF-1 is a transcriptional target of p53 in DNA damage-induced apoptosis. *Cancer Res.* 61: 6660-6664, 2001.
3. Bao, Q.; Lu, W.; Rabinowitz, J. D.; Shi, Y. : Calcium blocks formation of apoptosome by preventing nucleotide exchange in Apaf-1. *Molec. Cell* 25: 181-192, 2007.
4. Soengas, M. S.; Capodieci, P.; Polsky, D.; Mora, J.; Esteller, M.; Opitz-Araya, X.; McCombie, R.; Herman, J. G.; Gerald, W. L.; Lazebnik, Y. A.; Cordon-Cardo, C.; Lowe, S. W. : Inactivation of the apoptosis effector Apaf-1 in malignant melanoma. *Nature* 409: 207-211, 2001.



5. Chu, Z L; Pio F, Xie Z, Welsh K, Krajewska M, Krajewski S, Godzik A, Reed J C (Mar. 2001). "A novel enhancer of the Apaf1 apoptosome involved in cytochrome c-dependent caspase activation and apoptosis". *J. Biol. Chem.* (United States) 276 (12): 9239-45.
6. Cho, Dong-Hyung; Hong Yeon-Mi, Lee Ho-June, Woo Ha-Na, Pyo Jong-Ok, Mak Tak W, Jung Yong-Keun (Sep. 2004). "Induced inhibition of ischemic/hypoxic injury by APIP, a novel Apaf-1-interacting protein". *J. Biol. Chem.* (United States) 279 (38): 39942-50.
7. Li, P; Nijhawan D, Budihardjo I, Srinivasula S M, Ahmad M, Alnemri E S, Wang X (Nov. 1997). "Cytochrome c and dATP-dependent formation of Apaf-1/caspase-9 complex initiates an apoptotic protease cascade". *Cell* (UNITED STATES) 91 (4): 479-89.
8. Hu, Y; Benedict M A, Wu D, Inohara N, Núñez G (Apr. 1998). "Bcl-XL interacts with Apaf-1 and inhibits Apaf-1-dependent caspase-9 activation". *Proc. Natl. Acad. Sci. U.S.A.* (UNITED STATES) 95 (8): 4386-91.
9. Pan, G; O'Rourke K, Dixit V M (Mar. 1998). "Caspase-9, Bcl-XL, and Apaf-1 form a ternary complex". *J. Biol. Chem.* (UNITED STATES) 273 (10): 5841-5.
10. Saleh, A; Srinivasula S M, Balkir L, Robbins P D, Alnemri E S (Aug. 2000). "Negative regulation of the Apaf-1 apoptosome by Hsp70". *Nat. Cell Biol.* (ENGLAND) 2 (8): 476-83.

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