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**anti-cytochrome C**

Cat #: HM1107  
Rabbit polyclonal IgG  
0.2 µg/µl, store at 4 °C

For research use only

**APPLICATIONS**

Cytochrome c is a heme-containing electron transport protein essential to energy conversion in all aerobic organisms. In mammalian cells, it is normally localized to the mitochondrial intermembrane space. Recent studies have shown that cytochrome c is a factor necessary for activation of apoptosis. During apoptosis, cytochrome c is translocated from the mitochondrial membrane to the cytosol, where it is required for activation of caspase-3 (CPP32). The release of cytochrome c from mitochondria can be blocked by Bcl-2, thereby blocking the apoptotic process. Overexpression of Bax has been shown to induce the release of cytochrome c and to induce cell death. The release of cytochrome c from the mitochondria is thought to trigger an apoptotic cascade, whereby Apaf-1 binds to Apaf-3 (caspase-9) in a cytochrome c-dependent manner, leading to caspase-9 cleavage of CPP32.

**SPECIFICITY**

This antibody specifically reacts with cytochrome C of mouse, rat, and human origin.

The antibody can be used in Western blotting, immunoprecipitation and immunohistochemistry.

**IMMUNOGEN**

A recombinant protein corresponding to the full length cytochrome c of human origin.

**STORAGE**

This antibody is stable for 12 months when stored at 2-8°C.

1. Nishikimi,M., Suzuki,H., Ohta,S., Sakurai,T., Shimomura,Y., Tanaka,M., Kagawa,Y. and Ozawa,T. 1987. Isolation of a cDNA clone for human cytochrome c1 from a lambda gt11 expression library. *Biochem. Biophys. Res. Commun.* 145, 34-39.
2. Nishikimi,M., Ohta,S., Suzuki,H., Tanaka,T., Kikkawa,F., Tanaka,M., Kagawa,Y. and Ozawa,T. 1988. Nucleotide sequence of a cDNA encoding the precursor to human cytochrome c1. *Nucleic Acids Res.* 16, 3577.
3. Liu X, Kim CN, Yang J, Jemmerson R, Wang X. 1996. Induction of apoptotic program in cell-free extracts: requirement for dATP and cytochrome c. *Cell.* 86:147-57.
4. Yang J, Liu X, Bhalla K, Kim CN, Ibrado AM, Cai J, Peng TI, Jones DP, Wang X. 1997. Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked. *Science.* 275:1129-32.

5. Li P, Nijhawan D, Budihardjo I, Srinivasula SM, Ahmad M, Alnemri ES, Wang X. 1997. Cytochrome c and dATP-dependent formation of Apaf-1/caspase-9 complex initiates an apoptotic protease cascade. *Cell.* 91:479-89.

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