

Mcl-1 Ab-1 (Clone RC13)

Mouse Monoclonal Antibody

Cat. #MS-681-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 400µg/ml) (Purified Ab with BSA and Azide)

Cat. #MS-681-P1ABX or -PABX (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)

Cat. #MS-681-B0, -B1, or -B (0.1ml or 0.5ml or 1.0ml at 400µg/ml) (Biotin-Labeled Ab with BSA and Azide)

Cat. #MS-681-PCL (0.1ml) (Positive Control for Western Blot)

Please note this data sheet has been changed effective December 8, 2011

Description: Mcl-1 (Myeloid cell leukemia-1) is a member of the bcl-2 family. The carboxy terminal of Mcl-1 and bcl-2 share significant sequence homology. Expression of Mcl-1 is increased upon exposure of ML-1 cells to various types of DNA damaging agents (e.g. ionizing radiation, ultraviolet radiation, and alkylating drugs) along with increases in GADD45 and Bax and a decrease in bcl-2. Enhanced expression of Mcl-1, prominently associated with mitochondria, complements the continued expression of bcl-2 in ML-1 cells undergoing differentiation. Like bcl-2, Mcl-1 has the capacity to promote cell viability under conditions that otherwise cause apoptosis.

Mol. Wt. of Antigen: 42kDa

Epitope: aa 1-327

Species Reactivity: Human. Others-not known.

Clone Designation: RC13

Ig Isotype / Light Chain: IgG₁ / κ

Immunogen: Recombinant human Mcl-1 protein corresponding to aa 1-327.

Applications and Suggested Dilutions:

- Immunoprecipitation (Denatured verified)
(Use Protein G) (Ab 2µg/mg protein lysate)
- Western Blotting (Ab 1-2µg/ml for 2hrs at RT)

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: Raji cells.

Cellular Localization: Predominantly nuclear; occasionally cytoplasmic.

Supplied As:

400µg/ml of antibody purified from ascites fluid by Protein G chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml,

Storage and Stability:

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Suggested References:

1. Naumowski L, Cleary ML Blood 83: 2261-2266, 1994.
2. Reed JC: Curr Opin Oncol 7:541-546, 1995.

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbin systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

Additional Suggested References:

1. Haldar S, Basu A, Croce CM: Bcl-2 is the guardian of microtubule integrity. Cancer Res 57: 229-233, 1997.
2. Oltvai Z, Milliman C, Korsmeyer SJ: Bcl-2 heterodimerizes in vivo with a conserved homolog Bax that accelerates programmed cell death. Cell 74: 609-619, 1993.



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3. Ando T, Shibata H, Suzuki T, Kurihara I, Hayashi K, Hayashi M, Saito I, Kawabe H, Tsujioka M, Saruta T: The possible role of apoptosis-suppressing genes, bcl-2 and mcl-1/EAT in human adrenal tumors. *Endocr Res* 1998;24(3-4):955-960.

4. Bovia F, Nabili-Tehrani AC, Werner-Favre C, Barnet M, Kindler V, Zubler RH: Quiescent memory B cells in human peripheral blood co-express bcl-2 and bcl-x(L) anti-apoptotic proteins at high levels. *Eur J Immunol* 1998;28(12):4418-4423.

5. Chao JR, Wang JM, Lee SF, Peng HW, Lin YH, Chou CH, Li JC, Huang HM, Chou CK, Kuo ML, Yen JJ, Yang-Yen HF: mcl-1 is an immediate-early gene activated by the granulocyte-macrophage colony-stimulating factor (GM-CSF) signaling pathway and is one component of the GM-CSF viability response. *Mol Cell Biol* 1998;18(8):4883-4898.

6. Dorfman DM, Shahsafari A, Miyauchi A: Immunohistochemical staining for bcl-2 and mcl-1 in intrathyroidal epithelial thymoma (ITET)/carcinoma showing thymus-like differentiation (CASTLE) and cervical thymic carcinoma. *Mod Pathol* 1998;11(10):989-994.

7. Hsu SY, Hsueh AJ: A splicing variant of the Bcl-2 member Bok with a truncated BH3 domain induces apoptosis but does not dimerize with antiapoptotic Bcl-2 proteins in vitro. *J Biol Chem* 1998;273(46):30139-30146.

8. Huppertz B, Frank HG, Kingdom JC, Reister F, Kaufmann P: Villous cytotrophoblast regulation of the syncytial apoptotic cascade in the human placenta. *Histochem Cell Biol* 1998;110(5):495-508

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10. Moulding DA, Quayle JA, Hart CA, Edwards SW: Mcl-1 expression in human neutrophils:

regulation by cytokines and correlation with cell survival. *Blood* 1998;92(7):2495-2502.

11. Rieger L, Weller M, Bornemann A, Schabet M, Dichgans J, Meyermann R: BCL-2 family protein expression in human malignant glioma: a clinical-pathological correlative study. *J Neurol Sci* 1998;155(1):68-75.

12. Soini Y, Raunio H, Paakko P: High-grade malignant non-Hodgkin's lymphomas differ from low-grade lymphomas in the extent of apoptosis and their expression of bcl-2, mcl-1, bax and p53. *Tumour Biol* 1998;19(3):176-185.

13. Tang L, Tron VA, Reed JC, Mah KJ, Krajewska M, Li G, Zhou X, Ho VC, Trotter MJ: Expression of apoptosis regulators in cutaneous malignant melanoma. *Clin Cancer Res* 1998;4(8):1865-1871.

14. Wehrli BM, Krajewski S, Gascoyne RD, Reed JC, Gilks CB: Immunohistochemical analysis of bcl-2, bax, mcl-1, and bcl-X expression in ovarian surface epithelial tumors. *Int J Gynecol Pathol* 1998;17(3):255-260.

15. Whisler LC, Wood NB, Caldarelli DD, Hutchinson JC, Panje WR, Friedman M, Preisler HD, Leurgans S, Nowak J, Coon JS: Regulators of proliferation and apoptosis in carcinoma of the larynx. *Laryngoscope* 1998;108(5):630-638.

16. Witty JP, Jensen RA, Johnson AL: Expression and localization of Bcl-2 related proteins in human ovarian cancers. *Anticancer Res* 1998;18(2B):1223-1230.

17. Zhou P, Qian L, Bieszczyk CK, Noelle R, Binder M, Levy NB, Craig RW: Mcl-1 in transgenic mice promotes survival in a spectrum of hematopoietic cell types and immortalization in the myeloid lineage. *Blood* 1998 Nov 1;92(9):3226-3239.

