

Mcl-1 (B-6): sc-74436



The Power to Question

BACKGROUND

B cell CLL/lymphoma-2 (Bcl-2) blocks cell death following a variety of stimuli and confers a death-sparing effect to certain hematopoietic cell lines following growth factor withdrawal. Myeloid cell leukemia-1 (Mcl-1) shares sequence homology with Bcl-2 and further resembles Bcl-2 in that its expression promotes cell viability. p53 and Mcl-1 demonstrate opposing effects on mitochondrial apoptosis by mediating Bcl-2 antagonist killer (Bak) activity. Mcl-1 is an important and specific regulator that is necessary for the homeostasis of early hematopoietic progenitors. Glycogen synthase kinase-3 (GSK-3) controls Mcl-1 stability, which has an effect on the regulation of apoptosis by growth factors PI 3-kinase and Akt. Mice with a deficiency of the Mcl-1 protein show a significant reduction in B and T lymphocytes similar to the effects observed in IL-7- or IL-7R-deficient mice.

CHROMOSOMAL LOCATION

Genetic locus: MCL1 (human) mapping to 1q21.3; Mcl1 (mouse) mapping to 3 F2.1.

SOURCE

Mcl-1 (B-6) is a mouse monoclonal antibody raised against amino acids 1-260 of Mcl-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mcl-1 (B-6) is available conjugated to agarose (sc-74436 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74436 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74436 PE), fluorescein (sc-74436 FITC), Alexa Fluor® 488 (sc-74436 AF488), Alexa Fluor® 546 (sc-74436 AF546), Alexa Fluor® 594 (sc-74436 AF594) or Alexa Fluor® 647 (sc-74436 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74436 AF680) or Alexa Fluor® 790 (sc-74436 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Mcl-1 (B-6) is recommended for detection of Mcl-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

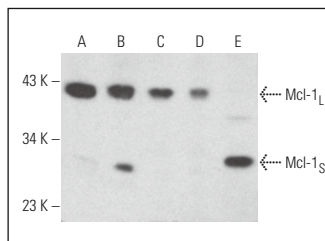
Suitable for use as control antibody for Mcl-1 siRNA (h): sc-35877, Mcl-1 siRNA (m): sc-35878, Mcl-1 shRNA Plasmid (h): sc-35877-SH, Mcl-1 shRNA Plasmid (m): sc-35878-SH, Mcl-1 shRNA (h) Lentiviral Particles: sc-35877-V and Mcl-1 shRNA (m) Lentiviral Particles: sc-35878-V.

Molecular Weight of Mcl-1 long/short form: 40/32 kDa.

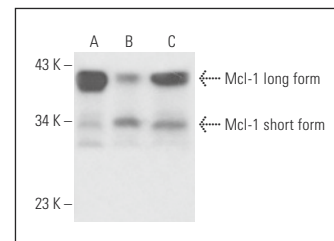
Positive Controls: Jurkat whole cell lysate: sc-2204, Ramos cell lysate: sc-2216 or AML-193 whole cell lysate: sc-364182.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

Mcl-1 (B-6): sc-74436. Western blot analysis of Mcl-1 expression in Ramos (A), Y79 (B), BJAB (C), Jurkat (D) and A-431 (E) whole cell lysates.



Mcl-1 (B-6): sc-74436. Western blot analysis of Mcl-1 expression in Ramos (A), K-562 (B) and AML-193 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Wang, P., et al. 2015. Dynamin-related protein Drp1 is required for Bax translocation to mitochondria in response to irradiation-induced apoptosis. *Oncotarget* 6: 22598-22612.
- Gigante, M., et al. 2016. miR-29b and miR-198 overexpression in CD8⁺ T cells of renal cell carcinoma patients down-modulates JAK3 and Mcl-1 leading to immune dysfunction. *J. Transl. Med.* 14: 84.
- Shimizu, K., et al. 2021. Interplay between protein acetylation and ubiquitination controls Mcl-1 protein stability. *Cell Rep.* 37: 109988.
- Daressy, F., et al. 2022. NA1-115-7, from *Zygogynum pancheri*, is a new selective Mcl-1 inhibitor inducing the apoptosis of hematological cancer cells but non-toxic to normal blood cells or cardiomyocytes. *Biomed. Pharmacother.* 154: 113546.
- Song, T., et al. 2023. Hsp70-Bim interaction facilitates mitophagy by recruiting parkin and TOMM20 into a complex. *Cell. Mol. Biol. Lett.* 28: 46.
- Mukherjee, N., et al. 2024. Mcl-1 inhibition targets myeloid derived suppressors cells, promotes antitumor immunity and enhances the efficacy of immune checkpoint blockade. *Cell Death Dis.* 15: 198.
- Bertova, A., et al. 2024. Sulforaphane and benzyl isothiocyanate suppress cell proliferation and trigger cell cycle arrest, autophagy, and apoptosis in human AML cell line. *Int. J. Mol. Sci.* 25: 13511.

RESEARCH USE

For research use only, not for use in diagnostic procedures.