

Mcl-1 (G-7): sc-74437

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 (G-7) 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 (G-7) is available conjugated to agarose (sc-74437 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74437 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74437 PE), fluorescein (sc-74437 FITC), Alexa Fluor[®] 488 (sc-74437 AF488), Alexa Fluor[®] 546 (sc-74437 AF546), Alexa Fluor[®] 594 (sc-74437 AF594) or Alexa Fluor[®] 647 (sc-74437 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74437 AF680) or Alexa Fluor[®] 790 (sc-74437 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Mcl-1 (G-7) 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), immunohistochemistry (including paraffin-embedded sections) (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 form: 40 kDa.

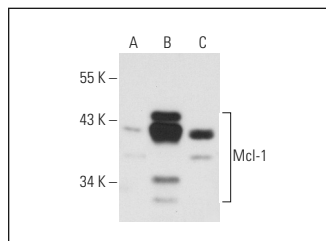
Molecular Weight of Mcl-1 short form: 32 kDa.

Positive Controls: Mcl-1 (h): 293T Lysate: sc-176626, Ramos cell lysate: sc-2216 or Jurkat whole cell lysate: sc-2204.

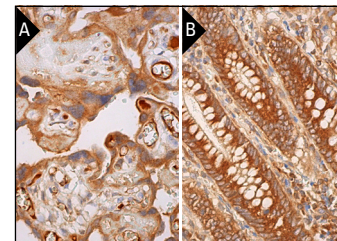
STORAGE

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

DATA



Mcl-1 (G-7): sc-74437. Western blot analysis of Mcl-1 expression in non-transfected 293T: sc-117752 (A), human Mcl-1 transfected 293T: sc-176626 (B) and Ramos (C) whole cell lysates.



Mcl-1 (G-7): sc-74437. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Hu, B.H. and Cai, Q. 2010. Acoustic overstimulation modifies Mcl-1 expression in cochlear sensory epithelial cells. *J. Neurosci. Res.* 88: 1812-1821.
- Cao, X.L., et al. 2011. Myocardin-related transcription factor-A promoting neuronal survival against apoptosis induced by hypoxia/ischemia. *Brain Res.* 1385: 263-274.
- Yang, W.P., et al. 2012. Age-related changes in the ratio of Mcl-1/Bax expression in the rat cochlea. *Acta Otolaryngol.* 132: 123-132.
- Yang, W.P., et al. 2013. Modulation of Mcl-1 expression reduces age-related cochlear degeneration. *Neurobiol. Aging* 34: 2647-2658.
- Yu, R.X., et al. 2018. Inhibition of two gastric cancer cell lines induced by fucoxanthin involves downregulation of Mcl-1 and Stat3. *Hum. Cell* 31: 50-63.
- Huang, Q., et al. 2019. Notopterol-induced apoptosis and differentiation in human acute myeloid leukemia HL-60 cells. *Drug Des. Devel. Ther.* 13: 1927-1940.
- Tan, S., et al. 2021. Fas/FasL mediates NFκBp65/PUMA-modulated hepatocytes apoptosis via autophagy to drive liver fibrosis. *Cell Death Dis.* 12: 474.
- Giri, J., et al. 2022. Translationally controlled tumor protein-mediated stabilization of host antiapoptotic protein Mcl-1 is critical for establishment of infection by intramacrophage parasite *Leishmania donovani*. *J. Immunol.* 208: 2540-2548.

RESEARCH USE

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

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