

# Mcl-1 (C-2): sc-377487

## 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 (GSK3) 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 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-149 within an internal region of Mcl-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377487 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Mcl-1 (C-2) is recommended for detection of Mcl-1 long and short forms 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).

Mcl-1 (C-2) is also recommended for detection of Mcl-1 long and short forms in additional species, including equine and canine.

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.

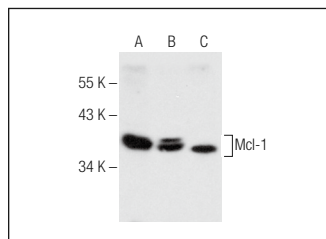
Molecular Weight of Mcl-1 short form: 32 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, K-562 whole cell lysate: sc-2203 or BJAB whole cell lysate: sc-2207.

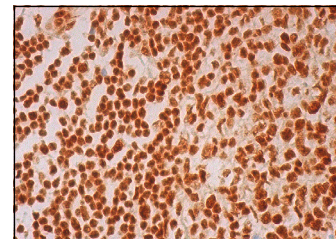
## STORAGE

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

## DATA



Mcl-1 (C-2): sc-377487. Western blot analysis of Mcl-1 expression in K-562 (A), AML-193 (B) and BJAB (C) whole cell lysates.



Mcl-1 (C-2): sc-377487. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal centers and cells in non-germinal centers.

## SELECT PRODUCT CITATIONS

- Zeuner, A., et al. 2014. Elimination of quiescent/slow-proliferating cancer stem cells by Bcl-x<sub>L</sub> inhibition in non-small cell lung cancer. *Cell Death Differ.* 21: 1877-1888.
- Wang, L., et al. 2015. MicroRNA-101 inhibits proliferation of pulmonary microvascular endothelial cells in a rat model of hepatopulmonary syndrome by targeting the JAK2/STAT3 signaling pathway. *Mol. Med. Rep.* 12: 8261-8267.
- Li, Y., et al. 2016. Xanthohumol inhibits proliferation of laryngeal squamous cell carcinoma. *Oncol. Lett.* 12: 5289-5294.
- He, X., et al. 2018. Loperamide, an antidiarrheal agent, induces apoptosis and DNA damage in leukemia cells. *Oncol. Lett.* 15: 765-774.
- Amin, A.R.M.R., et al. 2021. Combination of resveratrol and green tea epigallocatechin gallate induces synergistic apoptosis and inhibits tumor growth *in vivo* in head and neck cancer models. *Oncol. Rep.* 45: 87.
- Kim, J.L., et al. 2022. Role of phloretin as a sensitizer to TRAIL-induced apoptosis in colon cancer. *Oncol. Lett.* 24: 321.
- Choi, B.J., et al. 2024. Innovative therapeutic delivery of metastasis-associated in colon cancer 1-suppressing miRNA using high transmembrane 4 L6 family member 5-targeting exosomes in colorectal cancer mouse models. *Int. J. Mol. Sci.* 25: 9232.

## RESEARCH USE

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



See **Mcl-1 (22): sc-12756** for Mcl-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.