SANTA CRUZ BIOTECHNOLOGY, INC.

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

SANTA CRUZ BIOTECHNOLOGY

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 (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.

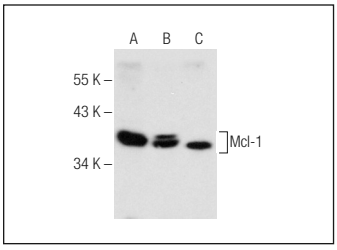
Molecular Weight of Mcl-1 short form: 32 kDa.

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

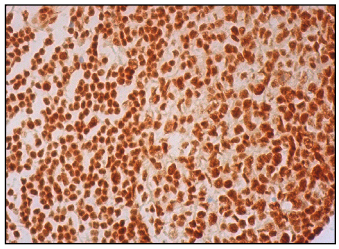
STORAGE

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

1. Chan, K.C., et al. 2014. Mulberry water extracts inhibit rabbit atherosclerosis through stimulation of vascular smooth muscle cell apoptosis via activating p53 and regulating both intrinsic and extrinsic pathways. J. Agric. Food Chem. 62: 5092-5101.
2. Zeuner, A., et al. 2014. Elimination of quiescent/slow-proliferating cancer stem cells by Bcl-x_L inhibition in non-small cell lung cancer. Cell Death Differ. 21: 1877-1888.
3. 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.
4. Li, Y., et al. 2016. Xanthohumol inhibits proliferation of laryngeal squamous cell carcinoma. Oncol. Lett. 12: 5289-5294.
5. He, X., et al. 2018. Loperamide, an antidiarrheal agent, induces apoptosis and DNA damage in leukemia cells. Oncol. Lett. 15: 765-774.
6. 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

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.