SANTA CRUZ BIOTECHNOLOGY, INC.

# Mcl-$1_L$ (K-20): sc-958

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 (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. The Mcl-1 mRNA is alternatively spliced into a long and a short form of the protein, designated Mcl-$1_L$ and Mcl-$1_S$, respectively. Mcl-$1_S$, unlike Mcl-$1_L$, does not interact with proapoptotic Bcl-2-related proteins.

## CHROMOSOMAL LOCATION

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

## SOURCE

Mcl-$1_L$ (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Mcl-$1_L$ of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Mcl-$1_L$ (K-20) is recommended for detection of Mcl-$1_L$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-$1_L$ (K-20) is also recommended for detection of Mcl-$1_L$ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Mcl-$1_L$ siRNA (h): sc-43912, Mcl-1 siRNA (m): sc-35878, Mcl-$1_L$ shRNA Plasmid (h): sc-43912-SH, Mcl-1 shRNA Plasmid (m): sc-35878-SH, Mcl-$1_L$ shRNA (h) Lentiviral Particles: sc-43912-V and Mcl-1 shRNA (m) Lentiviral Particles: sc-35878-V.

Molecular Weight of Mcl-$1_S$: 32 kDa.

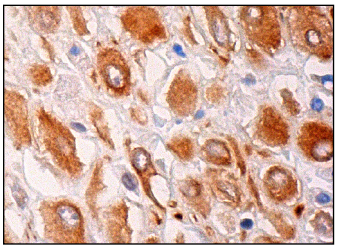
Molecular Weight of Mcl-$1_L$: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, BJAB whole cell lysate: sc-2207 or Ramos cell lysate: sc-2216.

## STORAGE

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

## DATA



Mcl-$1_L$ (K-20): sc-958. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells.

## SELECT PRODUCT CITATIONS


1. Asai, K., et al. 2001. Regulation of mast cell survival by IgE. Immunity 14: 791-800.
2. Delmas, D., et al. 2003. Resveratrol-induced apoptosis is associated with FAS redistribution in the rafts and the formation of a death-inducing signaling complex in colon cancer cells. J. Biol. Chem. 278: 41482-41490.
3. Davoodi-Semiromi, A., et al. 2004. A mutant Stat5b with weaker DNA binding affinity defines a key defective pathway in nonobese diabetic mice. J. Biol. Chem. 279: 11553-11561.
4. Langley, R.R., et al. 2004. Activation of the platelet-derived growth factor-receptor enhances survival of murine bone endothelial cells. Cancer Res. 64: 3727-3730.
5. Weng, C., et al. 2005. Specific cleavage of Mcl-1 by caspase-3 in tumor necrosis factor-related apoptosis-inducing ligand (TRAIL)-induced apoptosis in Jurkat leukemia T cells. J. Biol. Chem. 280: 10491-10500.
6. Jamil, S., et al. 2005. A proteolytic fragment of Mcl-1 exhibits nuclear localization and regulates cell growth by interaction with Cdk1. Biochem. J. 387: 659-667.
7. Kubota, Y. and Kinoshita, K. 2007. Mcl-1 Depletion in apoptosis elicited by Ionizing radiation in peritoneal resident macrophages of C3H mice. J. Immunol. 178: 2923-2931.
8. Zhang, Q., et al. 2008. Molecular mechanism underlying differential apoptosis between human melanoma cell lines UACC903 and UACC903(+6) revealed by mitochondria-focused cDNA microarrays. Apoptosis 13: 993-1004.
9. Garrel, C., et al. 2010. Developmental changes in antioxidant enzymatic defences against oxidative stress in sheep placentomes. J. Endocrinol. 205: 107-116.


## RESEARCH USE

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