SANTA CRUZ BIOTECHNOLOGY, INC.

Mcl-1 (MCL701): sc-69838

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.

REFERENCES

1. Kozopas, K.M., et al. 1993. Mcl-1, a gene expressed in programmed myeloid cell differentiation, has sequence similarity to Bcl-2. Proc. Natl. Acad. Sci. USA 90: 3516-3520.
2. Craig, R.W., et al. 1994. Human and mouse chromosomal mapping of the myeloid cell leukemia-1 gene: Mcl-1 maps to human chromosome 1q21, a region that is frequently altered in preneoplastic and neoplastic disease. Genomics 23: 457-463.

CHROMOSOMAL LOCATION

Genetic locus: MCL1 (human) mapping to 1q21.3.

SOURCE

Mcl-1 (MCL701) is a mouse monoclonal antibody raised against recombinant full length Mcl-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mcl-1 (MCL701) is recommended for detection of Mcl-1 of 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).

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

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

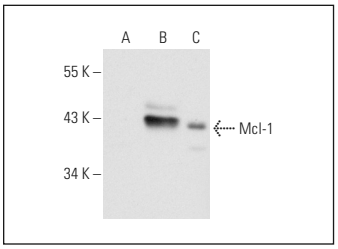
Molecular Weight of Mcl-1 short form: 32 kDa.

Positive Controls: Mcl-1 (h): 293T Lysate: sc-176626, Ramos cell lysate: sc-2216 or K-562 whole cell lysate: sc-2203.

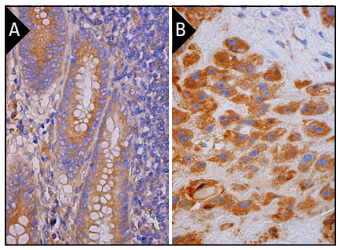
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Mcl-1 (MCL701): sc-69838. 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 (MCL701): sc-69838. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Rajendran, P., et al. 2011. Suppression of signal transducer and activator of transcription 3 activation by butein inhibits growth of human hepatocellular carcinoma *in vivo*. Clin. Cancer Res. 17: 1425-1439.

STORAGE

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

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.