

MCL-1 Monoclonal Antibody (RC13)

Catalog Number AHO0102

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Human
Host/Isotope	Mouse / IgG1, kappa	Published species	Human
Class	Monoclonal	Tested Applications Dilution *	
Type	Antibody	Immunoprecipitation (IP)	2 µg / mg lysate
Clone	RC13	Western Blot (WB)	1-2 µg / mg
Immunogen	Recombinant human Mcl-1 protein corresponding to amino acids 1-327.	Published Applications	
Conjugate	Unconjugated	Western Blot (WB)	See 3 publications below
Form	Liquid	Immunoprecipitation (IP)	See 1 publications below
Concentration	0.4 mg/mL	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Purification	Protein G		
Storage buffer	PBS, pH 7.4, with 0.2% BSA		
Contains	0.09% sodium azide		
Storage Conditions	4° C		

Background/Target Information

MCL1 (Myeloid cell leukemia-1) belongs to the Bcl-2 family and is involved in programing, differentiation and concomitant maintenance of cell viability, but not of proliferation. Isoform 1 of MCL1 inhibits apoptosis while isoform 2 promotes it. The carboxy terminal of MCL1 and bcl-2 share significant sequence homology. Expression of MCL1 is increased upon exposure of ML-1 cells to various types of DNA damaging agents (e.g. ionizing radiation, ultraviolet radiation, and alkylating drugs) along with increases in GADD45 and Bax and a decrease in bcl-2. Enhanced expression of MCL1, prominently associated with mitochondria, complements the continued expression of bcl-2 in ML-1 cells undergoing differentiation. Like bcl-2, MCL1 has the capacity to promote cell viability under conditions that otherwise cause apoptosis. While the mechanism by which MCL1 inhibits apoptosis is not known, it is thought that it may heterodimerize and neutralize pro-apoptotic members of the Bcl-2 family such as Bim or Bak. MCL1 was originally identified in differentiating myeloid cells, but has since been shown to be expressed in multiple cell types. MCL1 is essential for embryogenesis and for the development and maintenance of B and T lymphocytes in animals. MCL1 exists as at least two distinct isoforms designated MCL1L and MCL1S. In marked contrast to the larger isoform of MCL1, overexpression of MCL1S promotes cell death.

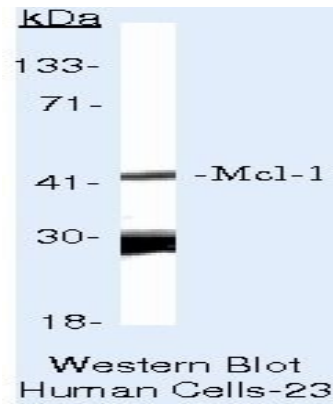
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Product Images For MCL-1 Monoclonal Antibody (RC13)



MCL-1 Antibody (AHO0102) in WB
Western blot analysis of Mcl-1 in Raji cells using a Mcl-1 monoclonal antibody (Product # AHO0102).

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PubMed References For MCL-1 Monoclonal Antibody (RC13)

3 Western Blot References

Species / Dilution	Summary
Human / Not Cited	AHO0102 was used in Western Blot to study dual inhibitors of the anti-apoptotic proteins Mcl-1 and Bfl-1.
	Journal of medicinal chemistry (2020; 63: 2489) "Discovery and Characterization of 2,5-Substituted Benzoic Acid Dual Inhibitors of the Anti-apoptotic Mcl-1 and Bfl-1 Proteins." Author(s):Kump KJ,Miao L,Mady ASA,Ansari NH,Shrestha UK,Yang Y,Pal M,Liao C,Perdih A,Abulwerdi FA,Chinnaswamy K,Meagher JL,Carlson JM,Khanna M,Stuckey JA,Nikolovska-Coleska Z PubMed Article URL: http://dx.doi.org/10.1021/acs.jmedchem.9b01442
	AHO0102 was used in Western Blotting to investigate the potential anti-apoptotic role of newly synthesised proteins released into the external milieu in IL-15-induced neutrophils.
Human / Not Cited	Journal of leukocyte biology (2004; 75: 893) "Interleukin-15 delays human neutrophil apoptosis by intracellular events and not via extracellular factors: role of Mcl-1 and decreased activity of caspase-3 and caspase-8." Author(s):Bouchard A,Rathé C,Girard D PubMed Article URL: http://dx.doi.org/10.1189/jlb.1103585
	AHO0102 was used in Western Blotting to evaluate the DNA damage response from a phase I-II clinical trial of fludarabine, bendamustine, and rituximab to treat relapsed/refractory chronic lymphocytic leukemia.
Human / Not Cited	Oncotarget (2017; 8: 22104) "A phase I-II trial of fludarabine, bendamustine and rituximab (FBR) in previously treated patients with CLL." Author(s):Jain N,Balakrishnan K,Ferrajoli A,O'Brien SM,Burger JA,Kadia TM,Cortes JE,Ayres ML,Tambaro FP,Keating MJ,Gandhi V,Wierda WG PubMed Article URL: http://dx.doi.org/10.18632/oncotarget.12054

1 Immunoprecipitation References

Species / Dilution	Summary
Human / Not Cited	AHO0102 was used in Immunoprecipitation to examine a series of indole-2-carboxylic acids that selectively bind to MCL-1, with sufficient affinity to disrupt MCL-1-BIM complexes in living cells.
	Cell death & disease (2015; 6:) "Potent and selective small-molecule MCL-1 inhibitors demonstrate on-target cancer cell killing activity as single agents and in combination with ABT-263 (navitoclax)." Author(s):Levenson JD,Zhang H,Chen J,Tahir SK,Phillips DC,Xue J,Nimmer P,Jin S,Smith M,Xiao Y,Kovar P,Tanaka A,Bruncko M,Sheppard GS,Wang L,Gierke S,Kategaya L,Anderson DJ,Wong C,Eastham-Anderson J,Ludlam MJ,Sampath D,Fairbrother WJ,Wertz I,Rosenberg SH,Tse C,Elmore SW,Souers AJ PubMed Article URL: http://dx.doi.org/10.1038/cddis.2014.561

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