Datasheet for ABIN6657786

anti-MCL-1 antibody (Internal Region)

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Overview

Quantity:	100 µg
Target:	MCL-1 (MCL1)
Binding Specificity:	Internal Region
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MCL-1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

Product Details

Purpose:	Mcl-1 Antibody
Immunogen:	This affinity purified antibody was purified from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to an internal region of mouse Mcl-1 conjugated to Keyhole Limpet Hemocyanin (KLH).
Isotype:	IgG
Cross-Reactivity (Details):	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum.
Purification:	This affinity-purified antibody was prepared from monospecific antiserum by immunoaffinity chromatography using synthetic peptide coupled to agarose beads followed by cross adsorption to remove any unwanted reactivity.
Sterility:	Sterile filtered

Target Details

Target:	MCL-1 (MCL1)
Alternative Name:	Mcl-1 (MCL1 Products)
Background:	Synonyms: rabbit anti-Mcl-1 antibody, Mcl1, Mcl 1, Bcl 2 related protein EAT/mcl1 antibody, Bcl2 related antibody, EAT antibody, Induced myeloid leukemia cell differentiation protein Mcl-1 antibody Background: Regulated apoptosis is essential for both the development and the subsequent maintenance of the immune system. Interleukins, including IL-2, IL-4, IL-7 and IL-15, heavily influence lymphocyte survival during the vulnerable stages of VDJ rearrangement and later in ensuring cellular homeostasis, but the genes specifically responsible for the development and maintenance of lymphocytes have not been identified. The Anti apoptotic protein Mcl-1 (myeloid cell leukemia sequence 1 (BCL2-related)) is an attractive candidate, as it is highly regulated, appears to enhance short-term survival and functions at an apical step in genotoxic deaths. However, Mcl-1 deficiency results in peri-implantation lethality. Mice, conditional for Mcl-1, display a profound reduction in B and T lymphocytes when Mcl-1 is removed. Deletion of Mcl-1 during early lymphocyte differentiation increases apoptosis and arrests the development at pro-B-cell and double negative T-cell stages. Induced deletion of Mcl-1 in peripheral B- and T-cell populations results in their rapid loss. Moreover, IL-7 both induces and requires Mcl-1 to mediate lymphocyte survival. Mcl-1 is essential both early in lymphoid development and later on in the maintenance of mature lymphocytes. Gene Name: Mcl1
Gene ID:	17210
UniProt:	P97287
Pathways:	MAPK Signaling

Application Details

Application Notes:	ELISA_Dilution: 1:10,000 - 1:50,000 Western_Blot_Dilution: 1:10,000 Other: User Optimized
Comment:	Suggested Applications: FC, IF, IHC, IP Anti-Mcl-1 Antibody has been tested by ELISA and western blot and is suitable for immunoprecipitation. This antibody detects mouse Mcl-1 and is not expected to cross react with the human sequence. Cross reactivity with Mcl-1 from other sources is unknown. This antibody is highly specific, showing no bands in null cell lysates from Mcl-1 knockout mice even

Application Details

	when grossly over-exposed. Mouse Mcl-1 (myeloid cell leukemia sequence 1) is composed of 331 amino acids and is reported to be 35.2 kDa in size. The human ortholog consists of 351 amino acids and is reported to be 37.3 kDa in size.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	Karbon, Schuler, Braun, Eichin, Haschka, Drach, Sotillo, Geley, Spierings, Tijhuis, Foijer, Villunger: "Chronic spindle assembly checkpoint activation causes myelosuppression and gastrointestinal atrophy." in: **EMBO reports**, Vol. 25, Issue 6, pp. 2743-2772, (2024) (PubMed). Lindenboim, Zohar, Gundersen, Worman, Stein: "LINC complex protein nesprin-2 has pro-apoptotic activity via Bcl-2 family proteins." in: **Cell death discovery**, Vol. 10, Issue 1, pp. 29, (2024) (PubMed). Prucsi, Zimny, Płonczyńska, Zubrzycka, Potempa, Sochalska: "Porphyromonas gingivalis Peptidyl Arginine Deiminase (PPAD) in the Context of the Feed-Forward Loop of Inflammation in Periodontitis." in: **International journal of molecular sciences**, Vol. 24, Issue 16, (2023) (

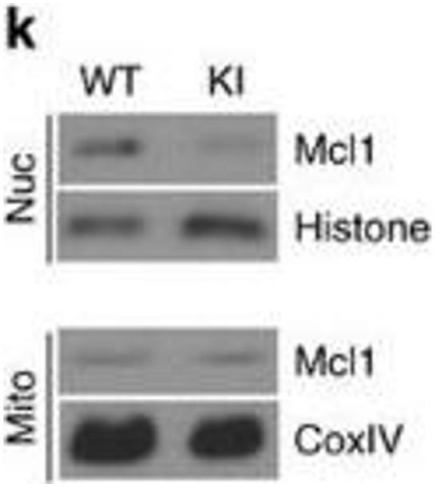
PubMed).

Quarato, Mari, Barrows, Yang, Ruehl, Chen, Guy, Low, Chen, Green: "Mitophagy restricts BAX/BAK-independent, Parkin-mediated apoptosis." in: **Science advances**, Vol. 9, Issue 21, pp. eadg8156, (2023) (PubMed).

Huang, Chin, Reljic, Djajawi, Tan, Gong, Stroud, Huang, van Delft, Dewson: "Mitochondrial E3 ubiquitin ligase MARCHF5 controls BAK apoptotic activity independently of BH3-only proteins." in: **Cell death and differentiation**, Vol. 30, Issue 3, pp. 632-646, (2023) (PubMed).

There are more publications referencing this product on: Product page

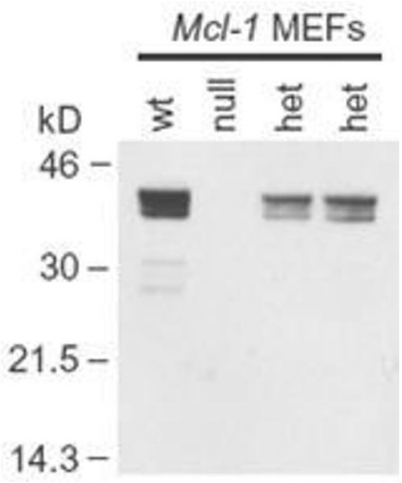
Images



Western Blotting

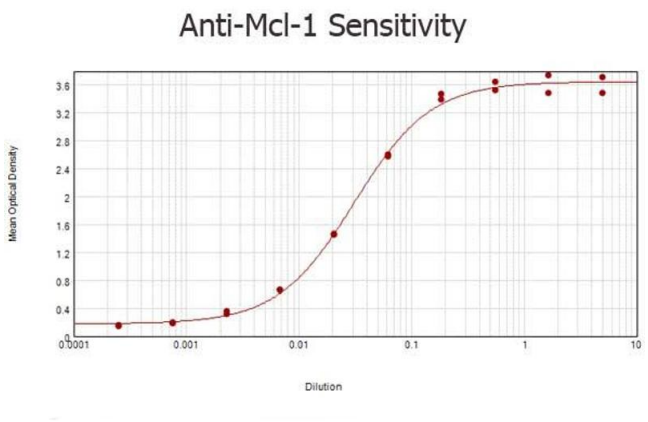
Image 1. Inactivation of GSK3β by p38 MAPK promotes accumulation of the prosurvival factor Mcl-1.(a,b) WT and GSK3β-KI B cells were activated for two days and the expression of β-catenin (a), Mcl-1, P-S389 GSK3β and total GSK3β (b) were examined by western blotting. GAPDH is shown as a loading control. (c) WT and GSK3β-KI B cells were activated as in a and Bclx, Bcl2, Bid, Bax and Bad levels were examined by western blotting. (d) Western blot analysis for PUMA in irradiated WT thymocytes (5Gy) and activated WT and GSK3β-KI B cells. (e,f) B cells activated as in a were stained with MitoTracker (e) or TMRE (f) and analysed by flow cytometry. The number represents the percentage of cells within the gate. (g) WT and GSK3β-KI B cells were examined by western blotting for the expression of cleaved caspase-3 (activated caspase-3), full length RIPK1 (RIPK1) and cleaved RIPK1 (cleaved RIPK1). (h) WT and GSK3β-KI B cells were activated, after 2 days Nectrostatin-1s (Nec-1s) was added and cell viability was determined by cell counting 24h later (n=3). (i) WT and GSK3β-KI B cells were activated for 3 days and phospho-

MLKL was examined by western blotting. (j) WT and GSK3β-KI B cells in the presence or absence of the GSK3 inhibitor (GSK3-Inh) were activated and examined by immunostaining and confocal microscopy for Mcl-1 (red) and TOPRO nuclear stain (blue). Scale bar, 3μm. (k) Mcl-1 levels in nuclear (Nuc) and mitochondrial (Mito) extracts from activated WT and GSK3β-KI B cells were determined by western blot analysis. Histone and CoxIV (Complex IV) were used as loading controls. (l) WT and GSK3β-KI B cells were transduced with either an empty retrovirus (E), a retrovirus expressing wildtype Mcl-1 (Mcl) or a retrovirus expressing a Ser140Ala mutant of Mcl-1 (mMcl). Three days after activation cell viability was determined by cell counting. (n=3) and *P value<0.05 as determined by t- test (h) or one-way ANOVA (l). Data are representative of three or more independent experiments. - figure provided by CiteAb. Source: PMID26822034



Western Blotting

Image 2. Anti-Mcl-1 Antibody - Western Blot. Western blot analysis using anti-Mcl-1 antibody to detect Mcl-1 in MEF cell lysates (20 ?g per lane). Anti-Mcl-1 was used at a dilution of 1:10,000 followed by reaction with HRP Anti-Rabbit IgG [H&L] MX10 (GOAT) used at a 1:2,000 dilution. Western Lightning Chemiluminescence Reagent Plus from Perkin Elmer was used for detection. The exposure time was exactly 30 seconds. This antibody detects 35 kDa mouse Mcl-1. Communicated with permission by J. Opferman and S. Korsmeyer. See Opferman et al (2003) for additional details.



ELISA

Image 3. Rabbit anti-Mcl-1 ELISA ELISA results of purified Rabbit anti-Mcl-1 Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) and TMB ELISA Peroxidase Substrate .

Please check the product details page for more images. Overall 10 images are available for ABIN6657786.