

# Mcl-1 (D35A5) Rabbit mAb

100 µl  
 (10 western blots)

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New 08/10

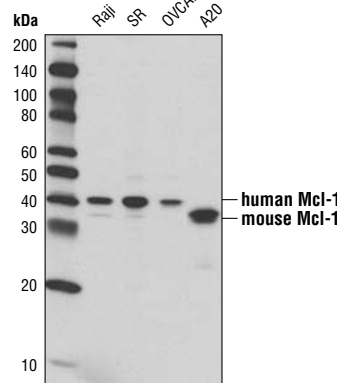
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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, (Mk, B)	40 kDa (human), 35 kDa (mouse)	Rabbit IgG**

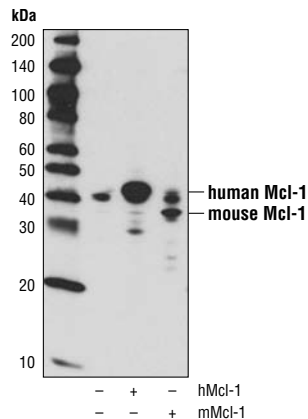
**Background:** Mcl-1 is an anti-apoptotic member of the Bcl-2 family originally isolated from the ML-1 human myeloid leukemia cell line during phorbol ester-induced differentiation along the monocyte/macrophage pathway (1). Similar to other Bcl-2 family members, Mcl-1 localizes to the mitochondria (2), interacts with and antagonizes pro-apoptotic Bcl-2 family members (3), and inhibits apoptosis induced by a number of cytotoxic stimuli (4). Mcl-1 differs from its other family members in its regulation at both the transcriptional and post-translational level. First, Mcl-1 has an extended amino-terminal PEST region, which is responsible for its relatively short half-life (1,2). Second, unlike other family members, Mcl-1 is rapidly transcribed via a PI3K/Akt dependent pathway, resulting in its increased expression during myeloid differentiation and cytokine stimulation (1,5-7). Mcl-1 is phosphorylated in response to treatment with phorbol ester, microtubule-damaging agents, oxidative stress, and cytokine withdrawal (8-11). Phosphorylation at Thr163, the conserved MAP kinase/ERK site located within the PEST region, slows Mcl-1 protein turnover (10) but may prime the GSK-3 mediated phosphorylation at Ser159 that leads to Mcl-1 destabilization (11). Mcl-1 deficiency in mice results in peri-implantation lethality (12). In addition, conditional disruption of the corresponding *mcl-1* gene shows that Mcl-1 plays an important role in early lymphoid development and in the maintenance of mature lymphocytes (13).

**Specificity/Sensitivity:** Mcl-1 (D35A5) Rabbit mAb detects endogenous levels of total Mcl-1 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu210 of human Mcl-1.



Western blot analysis of extracts from various cell lines using Mcl-1 (D35A5) Rabbit mAb.



Western blot analysis of extracts from 293T cells, mock transfected or transfected with human or mouse Mcl-1 constructs, using Mcl-1 (D35A5) Rabbit mAb.

**Entrez-Gene ID** #4170  
**Swiss-Prot Acc.** #Q07820

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Background References:**

- (1) Kozopas, K.M. et al. (1993) *Proc Natl Acad Sci USA* 90, 3516-20.
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- (4) Zhou, P. et al. (1997) *Blood* 89, 630-43.
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- (6) Jourdan, M. et al. (2003) *Oncogene* 22, 2950-9.
- (7) Chao, J.R. et al. (1998) *Mol Cell Biol* 18, 4883-98.
- (8) Domina, A.M. et al. (2000) *J Biol Chem* 275, 21688-94.
- (9) Inoshita, S. et al. (2002) *J Biol Chem* 277, 43730-4.
- (10) Domina, A.M. et al. (2004) *Oncogene* 23, 5301-15.
- (11) Maurer, U. et al. (2006) *Mol Cell* 21, 749-60.
- (12) Rinkenberger, J.L. et al. (2000) *Genes Dev* 14, 23-7.
- (13) Opferman, J.T. et al. (2003) *Nature* 426, 671-6.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**