

DMAP1 Antibody



Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

New 10/13

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez Gene ID #55929
UniProt ID #Q9NPF5

Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R, Mk, (Hm, Z, B, Dg)	Molecular Wt. 60 kDa	Source Rabbit**
-------------------------------------	---	-------------------------	--------------------

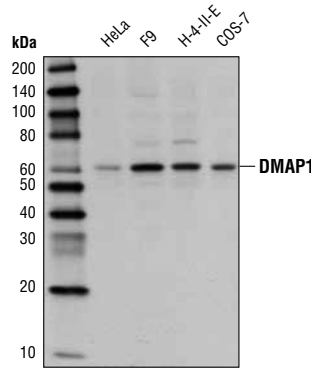
Background: DNA methyltransferase 1 (DNMT1)-associated protein 1 (DMAP1) is a nuclear protein that functions in transcriptional repression and DNA repair. DMAP1 was first identified as an activator of DNMT1 methyltransferase activity (1). Both DMAP1 and DNMT1 are targeted to replication foci during S phase and function to transfer proper methylation patterns to newly synthesized DNA during replication (1). In late S phase, DMAP1-DNMT1 co-operate with a p33ING1-Sin3-HDAC2 complex to maintain pericentric heterochromatin by deacetylating histones, methylating histone H3 at Lys9, and methylating DNA (1,2). The DMAP1 protein is also part of the TIP60-p400 complex, a histone acetyltransferases (HAT) and chromatin-remodeling complex that functions in DNA repair (3,4). Upon DNA damage, the TIP60-p400 complex acetylates histone H4 at Lys16 to induce chromatin relaxation and activation of the ATM kinase. DMAP1 is required for DNA-damage induced TIP60-p400-mediated histone acetylation, and deletion of DMAP1 impairs ATM function (5). DMAP1-DNMT1 may also methylate DNA at sites of DNA damage during homologous recombination, which results in gene silencing (6).

Specificity/Sensitivity: DMAP1 Antibody recognizes endogenous levels of total DMAP1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly121 of human DMAP1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Rountree, M.R. et al. (2000) *Nat Genet* 25, 269-77.
- (2) Xin, H. et al. (2004) *J Biol Chem* 279, 9539-46.
- (3) Cai, Y. et al. (2003) *J Biol Chem* 278, 42733-6.
- (4) Doyon, Y. et al. (2004) *Mol Cell Biol* 24, 1884-96.
- (5) Penicud, K. and Behrens, A. (2013) *Oncogene* , .
- (6) Lee, G.E. et al. (2010) *J Biol Chem* 285, 37630-40.



Western blot analysis of extracts from various cell lines using DMAP1 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

Tween® is a registered trademark of ICI Americas, Inc.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.