

DAPK1 Antibody

100 µl
(10 western blots)

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

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #1612
Swiss-Prot Acc. #P53355

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, (Mk)	160 kDa	Rabbit**

Background: Death-associated protein kinase (DAPK1) is a Ca²⁺/calmodulin-regulated serine/threonine kinase that participates in a wide range of apoptotic signals including interferon-γ, tumor necrosis factor α, Fas, activated c-Myc, and detachment from the extracellular matrix. In addition to the kinase domain and calmodulin regulatory segment, DAPK1 also has eight ankyrin repeats, a cytoskeleton binding region, and a conserved death domain (1-3). Deletion of the calmodulin-regulatory domain generates a constitutively active mutant kinase. Ectopic expression of wild-type DAPK1 induced cell death in HeLa cells. Conversely, expression of a catalytically inactive mutant protected cells from interferon-γ-induced cell death (4). The catalytic domain of DAPK1 has very high sequence similarity to vertebrate myosin light chain kinase (MLCK) and a RX(X(S/T)X motif derived from myosin light chain protein was shown to be phosphorylated *in vitro* by DAPK1 (5).

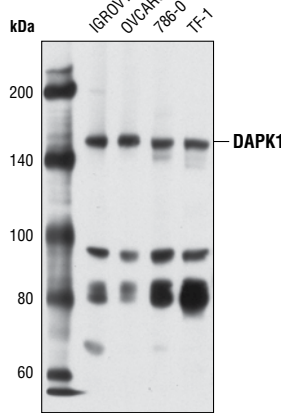
Epigenetic silencing of DAPK1 by promoter methylation has been observed in cases of chronic lymphocytic leukemia (6,7).

Specificity/Sensitivity: DAPK1 Antibody detects endogenous levels of total DAPK1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly905 of human DAPK1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Kimchi, A. (1999) *Ann Rheum Dis* 58, 114–119.
- (2) Cohen, O. et al. (1999) *J Cell Biol* 146, 141–148.
- (3) Deiss, L. P. et al. (1995) *Genes Dev* 9, 15–30.
- (4) Cohen, O. et al. (1997) *EMBO J* 16, 998–1008.
- (5) Velentza, A. V. et al. (2001) *J Biol Chem* 276, 38956–38965.
- (6) Raval, A. et al. (2007) *Cell* 129, 879–890.
- (7) Katzenellenbogen, R.A. et al. (1999) *Blood* 93, 4347–4353.



Western blot analysis of extracts from various cell lines using DAPK1 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

For application 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.

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.