

**DAPK1 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene ID:
W	H M	Endogenous	160	Rabbit	#P53355	1612

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**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.

**Specificity/Sensitivity**

DAPK1 Antibody detects endogenous levels of total DAPK1 protein.

**Species predicted to react based on 100% sequence homology**

Rat, Monkey

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly903 of human DAPK1. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Death-associated protein kinase (DAPK1) is a Ca<sup>2+</sup>/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 RXX(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).

**Background References**

1. Kimchi, A. (1999) *Ann Rheum Dis* 58, I14-I19.
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.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse

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