

#3008 Store at -20C

DAPK1 Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	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 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 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

- Kimchi, A. (1999) *Ann Rheum Dis.* 58, 114-119.
- Cohen, O. et al. (1999) *J Cell Biol* 146, 141-148.
- Deiss, L. P. et al. (1995) *Genes Dev* 9, 15-30.
- Cohen, O. et al. (1997) *EMBO J* 16, 998-1008.
- Velentza, A. V. et al. (2001) *J Biol Chem* 276, 38956-38965.
- Raval, A. et al. (2007) *Cell* 129, 879-890.
- 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

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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