

Store at  
-20C  
#55948**NADK Antibody**
**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

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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, IP	H M R Mk	Endogenous	50	Rabbit	#O95544	65220

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

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:100

**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 Source / Purification**

NADK Antibody recognizes endogenous levels of total NADK protein.

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human NADK protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

NADK, also known as NAD kinase, is a cytoplasmic protein responsible for maintaining the pool of available NADP<sup>+</sup> and NADPH within the cell (1). Using ATP as a phosphate donor, NADK catalyzes the phosphorylation of NAD<sup>+</sup> to NADP<sup>+</sup>. This molecule is then reduced to NADPH and utilized in various metabolic and biosynthetic pathways (2). NADK has been suggested to play a role in glucose metabolism due to the effect NADPH production has on both the insulin secretion and survival of pancreatic β-cells (3). NADPH has a vital role in protecting cells from oxidative stress through its neutralizing effect on reactive oxygen species (ROS), which also accumulate during cell growth (2-4). Along with the p53 tumor suppression protein, NADK has been a suggested target in cancer therapy due to its link to NADPH production and its resulting protective role on growing and proliferating cells (2).

**Background References**

1. Pollak, N. et al. (2007) *J Biol Chem* 282, 33562-71.
2. Tedeschi, P.M. et al. (2016) *Clin Cancer Res* 22, 5189-5195.
3. Gray, J.P. et al. (2012) *Am J Physiol Endocrinol Metab* 303, E191-9.
4. Grose, J.H. et al. (2006) *Proc Natl Acad Sci U S A* 103, 7601-6.

**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 **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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