

Store at
-20C
#55948

NADK Antibody



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

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 50	Source/Isotype: Rabbit	UniProt ID: #O95544	Entrez-Gene Id: 65220
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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

NADK Antibody recognizes endogenous levels of total NADK protein.

Source / Purification

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⁺ and NADPH within the cell (1). Using ATP as a phosphate donor, NADK catalyzes the phosphorylation of NAD⁺ to NADP⁺. 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

- Pollak, N. et al. (2007) *J Biol Chem* 282, 33562-71.
- Tedeschi, P.M. et al. (2016) *Clin Cancer Res* 22, 5189-5195.
- Gray, J.P. et al. (2012) *Am J Physiol Endocrinol Metab* 303, E191-9.
- 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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