

Recombinant Human NAD Kinase, His-tagged

Cat. No. NADK-613H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human NADK (aa 64-446) produced in E. coli is fused at the N-terminus to a His-tag.
Species	Human
Source	E. coli
Protein Length	64-446 a.a.
Description	NAD ⁺ kinase (EC 2.7.1.23, NADK) is an enzyme that converts nicotinamide adenine dinucleotide (NAD ⁺) into NADP ⁺ , through phosphorylating the NAD ⁺ coenzyme. NADP ⁺ is an essential coenzyme in metabolism and provides reducing power to biosynthetic processes such as fatty acid biosynthesis. The structure of the NADK from the archaean <i>Archaeoglobus fulgidus</i> has been determined. In humans, NAD ⁺ kinase is encoded by the NADK gene.
Purity	≥95% (SDS-PAGE).
Purity Detail	Free of any nucleotide converting side-activities.
Quantity	Sufficient for the preparation of >10 μmol of NADP from NAD and ATP in 1ml of a 10mM solution.
Formulation	Liquid. Ammonium sulphate suspension.

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Reconstitution	the pellet in 50mM TRIS/HCl pH 7.5, 150mM NaCl, 1mM DTT.
Specific Activity	≥3U/mg protein. One unit is defined as the amount of enzyme that synthesizes 1μmol of NADP per min.
Short Term Storage	+4°C.
Long Term Storage	-20°C.
Use/Stability	Stable for at least 3 months when stored at +4°C.
Handling	Avoid freeze/thaw cycles.

GENE INFORMATION

Gene Name	NADK NAD kinase [Homo sapiens]
Synonyms	NAD kinase; FLJ13052; FLJ37724; dJ283E3.1; RP1-283E3.6; NADK; poly(P)/ATP NAD kinase; OTTHUMP00000001110; EC 2.7.1.23
Gene ID	65220
mRNA Refseq	NM_023018
Protein Refseq	NP_075394
MIM	611616
UniProt ID	O95544
Chromosome	1p36.33-p36.21

Location**Pathway**

Metabolic pathways; Nicotinate and nicotinamide metabolism; Metabolism of vitamins and cofactors

Function

ATP binding; NAD⁺ kinase activity; metal ion binding; nucleotide binding; protein binding; transferase activity

Ribbon diagram of NAD⁺ kinase in complex with substrates.

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