

DESCRIPTION

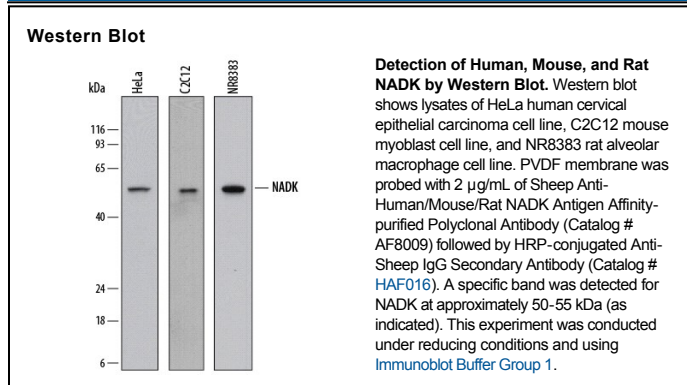
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human NADK Met1-Gly446 Accession # O95544
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NADK (Nicotinamide Adenine Dinucleotide Kinase; also Poly(P)/ATP NAD kinase) is a 49-52 kDa cytosolic member of the NAD kinase family of enzymes. Although it is widely expressed, it is not found in skeletal muscle. NADK forms homotetramers and catalyzes the generation of NADP from NAD through the hydrolysis of ATP. NADP plays a role in fatty acid synthesis plus steroidogenesis, and provides a substrate for the generation of NADPH that serves to regulate the expression of reductases and antioxidant proteins. Human NADK is 446 amino acids (aa) in length. It contains one kinase domain (aa 105-429) plus a C-terminal Ala- and Glu-rich segment. There are four utilized phosphorylation sites at Ser46, Ser48, Ser50 and Ser64. The potential exists for an alternate start site at Met134, and two isoform variants are reported, one that contain a 56 aa substitution for aa 1-88, and another that possesses a 105 aa substitution for Met88 coupled to a 41 aa insertion after Glu131. Full-length NADK (aa 1-446) shares 91% aa sequence identity with mouse NADK. Recently, a human mitochondrial NADK was identified (termed C5orf33), but found to share only 19% aa sequence identity with cytosolic NADK.