EnzyChrom™ NADP/NADPH Assay Kit

Pyridine nucleotides play an important role in metabolism and, thus, there is continual interest in monitoring their concentration levels. Quantitative determination of NADP+/NADPH has applications in research pertaining to energy transformation and redox state of cells or tissue.

Simple, direct and automation-ready procedures for measuring NADP+/NADPH concentration are very desirable. BioAssay Systems' EnzyChromTM NADP+/NADPH assay kit is based on a glucose dehydrogenase cycling reaction, in which a tetrazolium dye (MTT) is reduced by NADPH in the presence of phenazine methosulfate (PMS). The intensity of the reduced product color, measured at 565 nm, is proportionate to the $NADP^+$/NADPH concentration in the sample. Our assay is a convenient method to measure NADP, NADPH and their ratio.

KEY FEATURES

Sensitive and accurate. Detection limit 0.1 μM, linearity up to 10 μM $NADP^+$/NADPH in 96-well plate assay.
Convenient. The procedure involves adding a single working reagent, and reading the optical density at time zero and 30 min at room temperature. No 37°C heater is required.
High-throughput. Can be readily automated as a high-throughput 96-well plate assay for thousands of samples per day.

APPLICATIONS

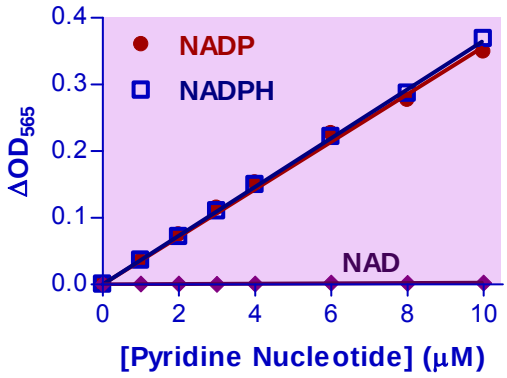
Direct Assays: $NADP^+$/NADPH concentrations and ratios in cell or tissue extracts.

PRODUCT INFORMATION:

EnzyChrom™ NADP/NADPH Assay Kit	ECNP-100

Each kit is sufficient for 100 assays in 96-well plate. Kit includes:

- 1 x 10 mL Assay Buffer
- 1 x 2 mL Glucose
- 1 x 2 mL PMS Solution
- 1 x 2 mL MTT Solution
- 1 x 120 μL Enzyme (GDH)
- 1 x 0.5 mL $NADP^+$ Standard
- 1 x 0.5 mL NADPH Standard
- 1 x 12 mL NAD(P) Extraction Buffer
- 1 x 12 mL NAD(P)H Extraction Buffer



Standard Curves in 96-well plate assay

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[2]. Matsumura, H. and Miyachi S (1980Cycling assay for nicotinamide adenine dinucleotides. Methods Enzymol. 69: 465-470.

[3]. Vilcheze, C et al. (2005). Altered NADH/NAD+ Ratio Mediates Coresistance to Isoniazid and Ethionamide in Mycobacteria. Antimicrobial Agents and Chemotherapy. 49(2): 708-720.