NADP Fluorimetric Assay Kit (Blue)

Cat. No. Kit-2051 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This Fluorimetric NADP Assay Kit provides a rapid and sensitive method for the measurement of NADP. The proprietary probe used in this kit reacts only to NADP to generate a product that has fluorescence at Ex/Em=420/480 nm, it has almost no response to NADPH.
Size	200 assays in 96-well plates
Description	Nicotinamide adenine dinucleotide (NAD+) and nicotinamide adenine dinucleotide phosphate (NADP+) are two important cofactors found in cells. NADH is the reduced form of NAD+, the oxidized form of NADH. NAD forms NADP with the addition of a phosphate group to the 2" position of the adenyl nucleotide through an ester linkage. NADP is used in anabolic biological reactions, such as fatty acid and nucleic acid synthesis, which requires NADPH as a reducing agent. In chloroplasts, NADP is an oxidizing agent important in the preliminary reactions of photosynthesis. The NADPH produced by photosynthesis is used as reducing power for the biosynthetic reactions in the Calvin cycle of photosynthesis. The traditional NAD/NADH and NADP/NADPH assays are done by monitoring the changes in NADH or NADPH absorption at 340 nm. This method suffers low sensitivity and high interference since the assay is done in the UV range that requires expensive quartz microplate.
Applications	The assay can be performed in a convenient 96-well or 384-well microtiter-plate format. Its signal can be easily read by a fluorescence microplate reader at Ex/Em = 420/480 nm.This kit has been used for screening enzyme activities that use NADP/NADPH as a cofactor. It has also been used for the sensitive detection of

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	NADP in cell-based assays.
Storage	Keep Component A in freezer (-20°C) and avoid exposure to light; Component C at -20°C; Component B &G at 4°C.
Kit Components	Component A: NADP Probe 1 bottles (5 ml)Component B: NADP Assay Solution 1 bottle (5 ml)Component C: Enhancer Solution 1 bottle (3.5 ml)Component D: NADP Standard 1 vial (389 g)Component G: NADP/NADPH Lysis Buffer 1 bottle (5 ml)
Detection method	Fluorescence microplate reader (Ex/Em = 420/480 nm)
Features & Benefits	Broad application: NADP detection in solution or cell extracts.Sensitive: Detect as low as 300 nM of NADPH in solution.Continuous: Easily adapted to automation without a separation step.Convenient: Formulated to have minimal hands-on time. No wash required.Non-radioactive: No special requirement for waste disposal.

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