

NADP/NADPH Assay Kit (Fluorometric) ab176724

★★★★☆ [1 Abreviews](#) [11 References](#) [1 图像](#)

概述

| | |
|-------|---|
| 产品名称 | NADP/NADPH Assay试剂盒(Fluorometric) |
| 检测方法 | Colorimetric/Fluorometric |
| 样品类型 | Cell culture extracts, Tissue Extracts |
| 检测类型 | Quantitative |
| 检测时间 | 1h 00m |
| 种属反应性 | 与反应: Mammals, Other species |
| 产品概述 | NADP/NADPH Assay Kit (Fluorometric) ab176724 provides a convenient method for sensitive detection of NADP, NADPH and their ratio. |

The enzymes in the system specifically recognize NADP/NADPH in an enzyme recycling reaction that significantly increases detection sensitivity. In addition, this assay has very low background since it is run in the red visible range that considerably reduces the sample interference.

The NADP/NADPH assay can be performed in a 96-well or 384-well microtiter-plate format. The signal can be read by either a fluorescence microplate reader at Ex/Em = 530-570/590-600 nm (maximum Ex/Em = 540/590 nm) or an absorbance microplate reader at ~576 nm.

NADP/ NADPH assay protocol summary:

- add samples and standards to wells
- add extraction solutions and incubate for 15 min
- add reaction mix and incubate for 30 min - 2 hr
- analyze with microplate reader

说明

Nicotinamide adenine dinucleotide (NAD⁺) and nicotinamide adenine dinucleotide phosphate (NADP⁺) are two important cofactors found in cells. NADH is the reduced form of NAD⁺, and NAD⁺ is 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 require 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.

平台

Microplate reader

性能

存放说明

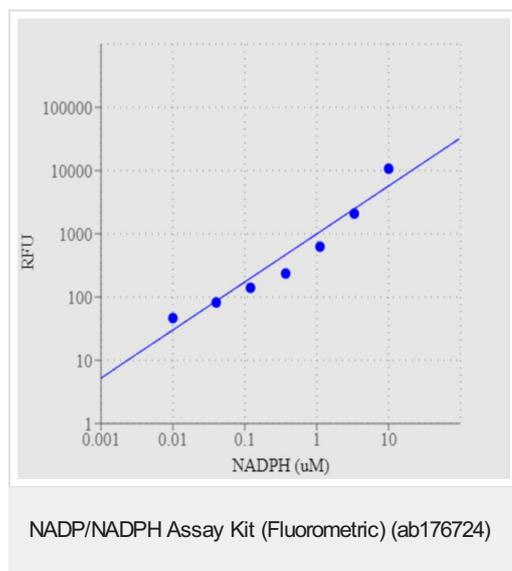
Store at -20°C. Please refer to protocols.

| 组件 | 250 tests |
|-------------------------------------|-----------|
| NADP Extraction Solution | 1 x 10ml |
| NADP/NADPH Control Solution | 1 x 10ml |
| NADP/NADPH Lysis Buffer | 1 x 10ml |
| NADP/NADPH Recycling Enzyme Mixture | 2 vials |
| NADPH Extraction Solution | 1 x 10ml |
| NADPH Sensor Buffer | 1 x 20ml |
| NADPH Standard | 1 vial |

相关性

NADP (Nicotinamide adenine dinucleotide phosphate) is a coenzyme composed of ribosylnicotinamide 5-phosphate (NMN) coupled by pyrophosphate linkage to the 5-phosphate adenosine 2,5-biphosphate. It serves as an electron carrier in a number of reactions, being alternately oxidised (NADP⁺) and reduced (NADPH). The oxidative phase of the pentose phosphate pathway is the major source of NADPH in cells, producing approximately 60% of the NADPH required. NADPH provides the reducing equivalents for biosynthetic reactions and the oxidation-reduction involved in protecting against the toxicity of ROS, allowing the regeneration of GSH. NADPH is also used for anabolic pathways, such as lipid synthesis, cholesterol synthesis and fatty acid chain elongation.

图片



NADPH dose response was measured with ab176724 in a 96-well solid black plate using a microplate reader.

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