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Product datasheet

NAD/NADH Assay Kit (Fluorometric) ab176723

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製品の概要

製品名	NAD/NADH Assay Kit (Fluorometric)
検出方法	Colorimetric/Fluorometric
サンプルの種類	Cell Lysate, Tissue Lysate
アッセイタイプ	Quantitative
全工程の試験時間	2h 30m
種交差性	**交差種:** Mammals, Other species
製品の概要	NAD/NADH Assay Kit (Fluorometric) ab176723 provides a convenient method for sensitive detection of NAD, NADH and their ratio. The enzymes used in the NAD/NADH assay protocol specifically recognize NAD/NADH in an enzyme cycling 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 interference from biological samples. There is no need to purify NAD/NADH from sample mix. The assay can be performed in a convenient 96-well or 384-well microtiter-plate format. The NAD/NADH assay signal can be easily read by either a fluorescence microplate reader at Ex/Em 530 - 570/590 - 600 nm (max Ex/Em 540/590 nm) or an absorbance microplate reader at ~576 nm. This kit provides NAD and NADH extraction buffer, and cell lysis buffer for your convenience. It has been frequently used for determining NAD/NADH from cell lysates. NAD/NADH assay protocol summary: - add standards and samples for NAD, NADH, total NAD/NADH measurement to wells - add NADH extraction solution to NADH wells, incubate for 10-15 min, and add NAD extraction solution to neutralize - add NAD extraction solution to NAD wells, incubate for 10-15 min, and add NADH extraction solution to neutralize - add NAD/NADH control solution to standard and total NAD/NADH wells, incubate for 10-15 min, and add NAD/NADH control solution - add NADH reaction mix and incubate for 30 min to 2 hr

- analyze with a microplate reader

試験プラットフォーム Microplate reader

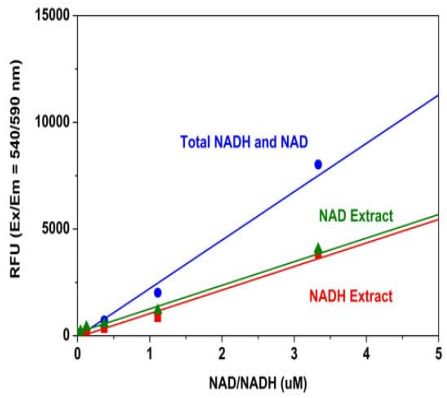
製品の特性

保存方法 Store at -20°C. Please refer to protocols.

内容	250 tests
NAD Extraction Solution	1 x 10ml
NAD/NADH Control Solution	1 x 10ml
NAD/NADH Lysis Buffer	1 x 10ml
NAD/NADH Recycling Enzyme Mixture	2 vials
NADH Extraction Solution	1 x 10ml
NADH Sensor Buffer	1 x 20ml
NADH Standard	1 vial

関連性 NAD (Nicotinamide adenine dinucleotide) is a coenzyme in metabolic redox reactions, a precursor for several cell signaling molecules, and a substrate for protein posttranslational modifications. NAD is a dinucleotide, consisting of two nucleotides joined through their phosphate groups: with one nucleotide containing an adenosine ring, and the other containing nicotinamide. In metabolism, NAD is involved in redox reactions, carrying electrons from one reaction to another. The coenzyme is therefore found in two forms in cells: NAD is an oxidizing agent – it accepts electrons from other molecules and becomes reduced, forming NADH, which can then be used as a reducing agent to donate electrons. These electron transfer reactions are the main function of NAD. However, it is also used in other cellular processes, the most notable one being a substrate of enzymes that add or remove chemical groups from proteins in posttranslational modifications.

画像



Total NADH and NAD Dose Response Curve

Total NADH and NAD, and their extract dose response were measured with NAD/NADH Assay Kit (Fluorometric) (ab176723) in a 96-well black plate using a Gemini microplate reader (Molecular Devices). The signal was acquired at Ex/Em = 540/590 nm (cut off at 570 nm) 30 minutes after adding NAD/NADHH reaction mixture. The blank signal was subtracted from the values for those wells with the NADH reactions.

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