

Nitric Oxide Assay Kit (Colorimetric) ab65328

★★★★★ [2 Abreviews](#) [99 References](#) [5 Images](#)

Overview

Product name	Nitric Oxide Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate
Assay type	Quantitative
Sensitivity	1 nmol/well
Range	1 nmol/well - 10 nmol/well
Assay time	1h 30m
Species reactivity	Reacts with: Mammals, Other species
Product overview	Nitric Oxide Assay Kit (Colorimetric) ab65328 provides an accurate, convenient measure of total nitrate/nitrite in a simple two-step process.

In the nitric oxide assay protocol:

- the first step converts nitrate to nitrite by using nitrate reductase
 - the second step uses Griess Reagent to convert nitrite to a deep purple azo compound.
- The amount of the azochromophore accurately reflects nitric oxide amount in samples.

Nitric oxide assay protocol summary:

- add samples and standards to wells
- add nitrate reductase and enzyme cofactor and incubate for 1 hr at room temp to convert nitrate to nitrite
- add enhancer and incubate for 10 min at room temp
- add Griess Reagent R1 and Griess Reagent R2
- analyze with microplate reader

Notes This product is manufactured by BioVision, an Abcam company and was previously called K262 Nitric Oxide Colorimetric Assay Kit. K262-200 is the same size as the 2 96 tests size of ab65328.

If you are interested in a fluorometric detection kit, please check [Nitric Oxide Assay Kit \(Fluorometric\) \(ab65327\)](#).

For an assay kit to detect nitrite alone see [Griess Reagent Kit ab234044](#).

Nitric oxide (NO) plays an important role in neurotransmission, vascular regulation, immune response and apoptosis. NO is rapidly oxidized to nitrite and nitrate which are used to quantitate NO production.

Platform

Microplate reader

Properties**Storage instructions**

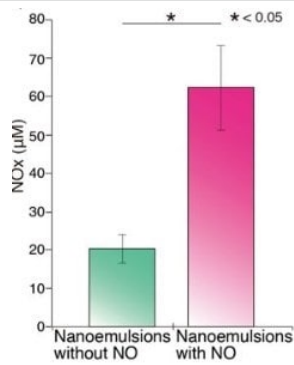
Store at -20°C. Please refer to protocols.

Components	2 x 96 tests
Assay Buffer XVII	1 x 30ml
Enhancer II	1 vial
Enzyme Cofactor	1 vial
Griess Reagent I	1 x 10ml
Griess Reagent II	1 x 10ml
96-Well Clear Plate	2 units
Nitrate Reductase I	1 vial
Nitrate Standard	1 vial
Nitrite Standard	1 vial
Microplate Sealing Film	2 units

Relevance

Nitric oxide (NO) is a key vertebrate biological messenger, playing an important role in neurotransmission, vascular regulation, immune responses and apoptosis. NO, also known as "endothelium-derived relaxing factor" or "EDRF", is synthesized from L-arginine, oxygen and NADPH by various NO synthases. Most of the NO in the cell is oxidized to nitrite (NO_2^-) and nitrate (NO_3^-), and therefore the concentrations of these anions are generally as a quantitative measure of NO production.

Images

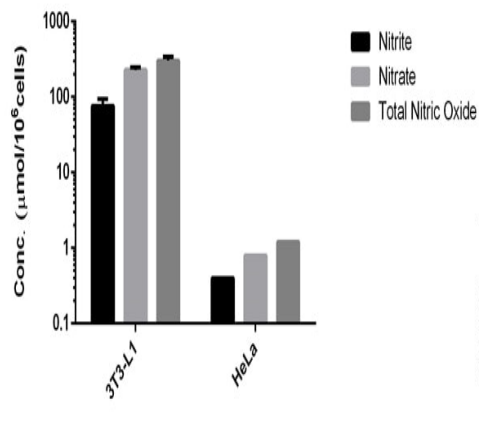


Nam, Eunryel et al.
Scientific reports vol. 8,1
7312. (2018)

Blood NOx concentration measured with ab65328. Blood NOx concentration after application of the NE with NO. The level of blood NOx concentration increased 3-fold after the application of the NE with NO compared with control group.

Functional Studies - Nitric Oxide Assay Kit (Colorimetric) (ab65328)

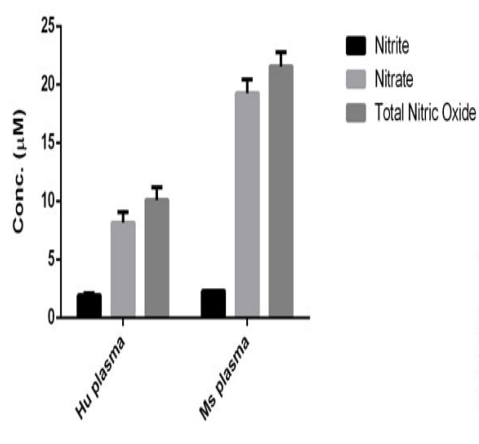
Nam, Eunryel et al., Scientific reports vol. 8,1 7312., Fig 4, doi:10.1038/s41598-018-25786-x



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Nitrite and nitrate measured in cell lysates showing quantity (micromol) per 10⁶ cells

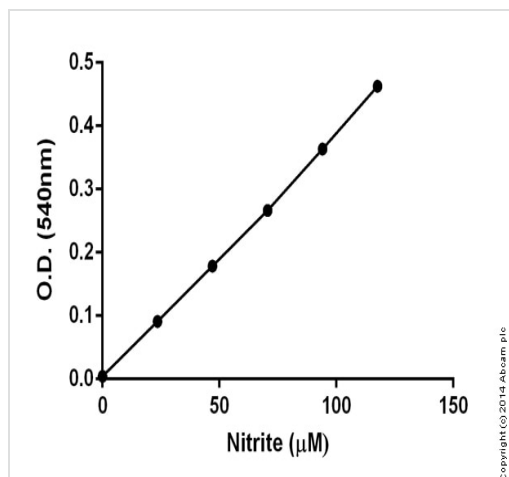
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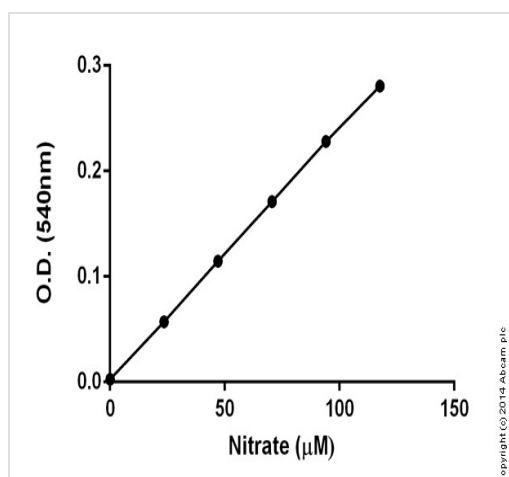
Nitrite and nitrate measured in biologicals showing concentration (micromolar)

Functional Studies - Nitric Oxide Colorimetric Assay Kit (ab65328)



Standard curve (colorimetric) : mean of duplicates (+/-SD) with background readings subtracted

Functional Studies - Nitric Oxide Colorimetric Assay
Kit (ab65328)



Standard curve (Colorimetric) : mean of duplicates (+/-SD) with background readings subtracted

Functional Studies - Nitric Oxide Colorimetric Assay
Kit (ab65328)

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