

Nitric Oxide Quantitation Kit

faster, more accurate measurement of nitric oxide production

Active Motif's Nitric Oxide Quantitation Kit is faster and easier-to-use than existing methods for measuring the production of nitric oxide (NO) in biological samples because it employs an innovative cofactor technology that reduces the time and number of steps required. The assay is also linear over a broader range of sample concentrations (Figure 1). This saves time and money as fewer of your samples will need to be diluted and re-assayed to obtain accurate results. The Nitric Oxide Quantitation Kit can be used with a variety of sample types, including plasma, serum, saliva, urine, cell lysate, tissue homogenate and tissue culture medium.

The NO Quantitation Kit advantage

- Cofactor technology accelerates nitrate reduction
- Higher sensitivity in fewer steps
- Linear results over a wider range of sample concentrations
- 96-well format enables high throughput

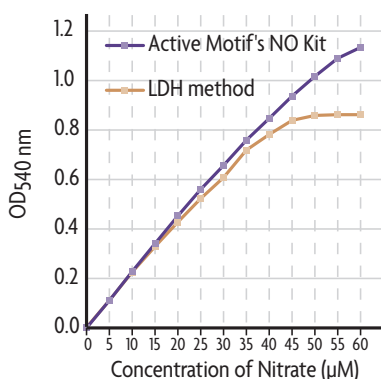
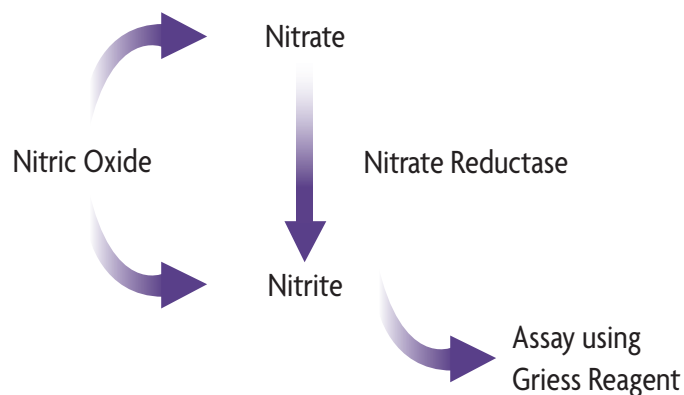


Figure 1: Dynamic range of nitrate standard curves.

Nitrate standard curves produced using the Nitric Oxide Quantitation Kit and an LDH-method kit. The Nitric Oxide Quantitation Kit provides linear results over a wider range of sample concentrations.



The principle of the Nitric Oxide Quantitation Kit.

NO has an extremely short half-life (< 10 seconds), which makes it difficult to detect and study. However, as NO is metabolized to nitrate and nitrite in the cell, quantitation of these stable anions can be used to measure the amount of NO that was originally present in a sample. Traditional assays do this in two steps. Nitrate is first converted into nitrite using nitrate reductase. Griess Reagent is then used to convert the nitrite into a purple-colored azo compound, which is quantitated by a spectrophotometer. However, NADPH, an essential cofactor for nitrate reduction, interferes with the Griess reaction, which severely limits the sensitivity of conventional assays. One method to increase sensitivity is to add a third step prior to the Griess reaction, in which lactate dehydrogenase (LDH) eliminates NADPH. In contrast, Active Motif's assay utilizes cofactors during the nitrate reductase step that accelerate this reaction while simultaneously degrading NADPH, enabling high sensitivity without a time-consuming third step.

Product	Format	Catalog No.
Nitric Oxide Quantitation Kit	2 x 96 rxns	40020

CONTENTS

Nitrate Reductase, Cofactors, Griess Reagents, Nitrate and Nitrite Standards, 10X Assay Buffer and two 96-well assay plates with plate sealers.