

General Nitrate Reductase Assay Kit | Marky_1807 assay kit

Nitrate Reductase Assay Kit

CATALOG # AAA17849	REACTIVITY General	APPLICATIONS Functional Assay
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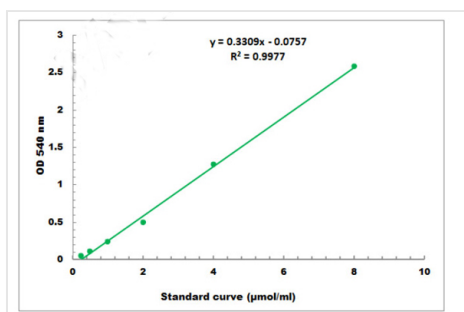
PRODUCT SYNONYMS

Nitrate Reductase; Nitrate Reductase Assay Kit; Marky_1807 assay kit

PRODUCT SPECIFICATIONS

Reactivity	General
Sequence Length	943
Samples	Tissue extracts, Cell lysate Samples
Detection Range	0.1 umol/ml - 8 umol/ml
Applicable Applications for Marky_1807 assay kit	FA (Functional Assay)
Preparation and Storage	Shipped and store at 4 degree C for 6 months.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Marky_1807 assay kit

Background: Nitrate Reductase (NR), also known as respiratory nitrate reductase. Eukaryotic nitrate reductases are part of the sulfite oxidase family of molybdoenzymes. They transfer electrons from NADH or NADPH to nitrate. Prokaryotic nitrate reductases belong to the DMSO reductase family of molybdoenzymes and have been classified into three groups, assimilatory nitrate reductases (Nas), respiratory nitrate reductase (Nar), and periplasmic nitrate reductases (Nap). The active site of these enzymes is a Mo ion that is bound to the four thiolate functions of two pterin molecules. The coordination sphere of the Mo is completed by one amino-acid side chain and oxygen and/or sulfur ligands. The exact environment of the Mo ion in certain of these enzymes (oxygen versus sulfur as a sixth molybdenum ligand) is still debated. The Mo is covalently attached to the protein by a cysteine ligand in Nap, and an aspartate in Nar. Nitrate reductase activity can be used as a biochemical tool for predicting grain yield and grain protein production. Nitrate reductase promotes amino acid production in tea leaves. It is reported that tea plants sprayed with various micronutrients (like Zn, Mn and B) along with Mo enhanced the amino acid content of tea shoots and also the crop yield. The assay is initiated with the enzymatic hydrolysis of the nitrate by Nitrate Reductase. The enzyme catalysed reaction products azo-compound can be measured at a colorimetric readout at 540 nm.

NCBI AND UNIPROT INFORMATION

NCBI GI #	328951314
NCBI GeneID	10434729
NCBI Accession #	YP_004368649.1
NCBI GenBank Nucleotide #	NC_015387.1
Molecular Weight	106,991 Da
NCBI Official Full Name	nitrate reductase
NCBI Official Symbol	Marky_1807
NCBI Protein Information	nitrate reductase
UniProt Protein Name	Nitrate reductase
UniProt Gene Name	Marky_1807
UniProt Entry Name	F2NPN8_MARHT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/general-assay-kits/nitrate-reductase/17849>