Nitric Oxide Synthase 1 (NOS1) Arabidopsis Thaliana Recombinant Protein

PRODUCT OVERVIEW

Product Name	Nitric oxide synthase 1 (NOS1), Recombinant Protein
Full Product Name	Recombinant Arabidopsis thaliana Nitric oxide synthase 1 (NOS1) , partial
Product Gene Name	NOS1 recombinant protein
Product Synonym Gene Name	NOS1
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	61,899 Da
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q66GP9
Species	Arabidopsis thaliana (Mouse-ear cress)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for NOS1 recombinant protein	MBS1421239 is a recombinant protein targeting NOS1. Also known as Recombinant Arabidopsis thaliana Nitric oxide synthase 1 (NOS1) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of NOS1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NOS1. It may not necessarily be applicable to this product.

NCBI GI #	42565686
NCBI GeneID	823899
NCBI Accession #	NP_190329.2
UniProt Primary Accession #	Q66GP9
UniProt Secondary Accession #	Q0WWY8; Q157M8; Q9STX8; F4JBJ3
UniProt Related Accession #	Q66GP9
GenBank Nucleotide #	NM_114613.3
NCBI Official Full Name	P-loop containing nucleoside triphosphate hydrolases superfamily protein
NCBI Official Symbol	NOA1

NCBI Official Synonym Symbols	ATNOA1; ATNOS1; NITRIC OXIDE SYNTHASE 1; NO ASSOCIATED 1; NOS1; RESISTANT TO INHIBITION WITH FOSMIDOMYCIN 1; RESISTANT TO INHIBITION WITH FOSMIDOMYCIN 1; RIF1
UniProt Protein Name	NO-associated protein 1, chloroplastic/mitochondrial
UniProt Synonym Protein Names	Dubious mitochondrial nitric oxide synthase 1 (EC:1.14.13.39); AtNOS1; GTPase NOA1; Protein RESISTANT TO INHIBITION BY FOSMIDOMYCIN 1
Protein Family	Nitric oxide synthase
UniProt Gene Name	NOA1
UniProt Synonym Gene Names	NOS1; RIF1; AtNOA1; AtNOS1
NCBI Protein Information	P-loop containing nucleoside triphosphate hydrolases superfamily protein
NCBI Summary for NOS1	Encodes a protein with similarity to the bacterial YqeH GTPase required for proper ribosome assembly. In Arabidopsis, mutant analyses show that this protein regulates growth and hormonal signaling in plants. It also attenuates oxidative stress and reactive oxygen species (ROS). It also seems to be involved in regulating leaf senescence and cell death. This gene product is also involved in nitric oxide biosynthesis in response to ABA but not exogenous H2O2. This protein also appears to be required for proper plastid biogenesis. Levels of several plastid-localized proteins, including RBCL, ClpP1, and the MEP biosynthesis enzymes DXS and DXR are altered in rif1-1 mutants. This protein was originally characterized as a mitrochondrial-localized nitric oxide synthase, but, the synthase activity was later disproven. In addition, new studies with GFP fusion proteins and chloroplast import assays suggest that this protein is found in chloroplasts.
UniProt Comments for NOS1	Exhibits cGTPase activity; binds and hydrolyzes specifically GTP (PubMed:18801746). May participate in ribosome assembly and stability and thus regulates protein synthesis in chloroplasts. The GTPase activity requires MgCl2and the presence of either KCl or (NH4)2SO4. Involved in the post-transcriptional regulation of the methylerythritol phosphate (MEP) pathway. Involved in chlorophyll-a fluorescence regulation.
Research Articles on NOS1	**1.** SVR10 and BPG2 are functionally related with VAR2, likely through their potential roles in regulating chloroplast protein homeostasis.
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