Nitric Oxide Synthase (NOS) Inhibitor Hp-228 [Nle4-Acetyl, Gln5, D-Phe7, D-Trp9]-a-MSH Amide Peptide – (4-10) Synthetic Peptide, ~95%. Purified by HPLC. Purity

PRODUCT OVERVIEW

Product Name	Nitric Oxide Synthase (NOS3), Peptide
Full Product Name	Nitric Oxide Synthase (NOS) Inhibitor HP-228 [Nle4-Acetyl, Gln5, D-Phe7, D-Trp9]-a-MSH (4-10) amide
Product Gene Name	NOS3 peptide
Host	Synthetic peptide
Form/Format	Supplied as a lyophilized powder.
Purity/Purification	Highly Purified ~95%. Purified by HPLC.
Preparation and Storage	Lyophilized powder may be stored at 4 degree C for short-term only. Stable for 12 months at -20 degree C. Reconstitute to nominal volume (see reconstitution instructions for peptides) and store at -20 degree C. For maximum recovery of product, centrifuge the original vial prior to removing the cap. Further dilutions can be made in assay buffer.
Molecular Weight	133,289 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (150688144..150711687). Location: 7q36
OMIM	163729
Sequence (linear)	Ac-Nle-Gln-His-D-Phe-Arg-D-Trp-Gly-NH2
Product Categories/Family for NOS3 peptide	Molecular Biology; MB-Peptides
Related Product Information for NOS3 peptide	MBS659228 is a peptide targeting NOS3. Also known as Nitric Oxide Synthase (NOS) Inhibitor HP-228 [Nle4-Acetyl, Gln5, D-Phe7, D-Trp9]-a-MSH (4-10) amide. Host: Synthetic peptide.
Other Notes	Small volumes of NOS3 peptide 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 NOS3. It may not necessarily be applicable to this product.

NCBI GI #	4262036
NCBI GeneID	4846
NCBI Accession #	AAD14336.1
UniProt Primary Accession #	P29474
UniProt Secondary Accession #	Q13662; Q14251; Q14434; Q548C1; Q6GSL5; Q9UDC6; A0S0A7; A0S0A8; A8KA63; B2RCQ1; E9PFR2
UniProt Related Accession #	P29474
NCBI Official Full Name	nitric oxide synthase, partial
NCBI Official Synonym Full Names	nitric oxide synthase 3 (endothelial cell)
NCBI Official Symbol	NOS3

NCBI Official Synonym Symbols	eNOS; ECNOS
UniProt Protein Name	Nitric oxide synthase, endothelial
UniProt Synonym Protein Names	Constitutive NOS; cNOS; EC-NOS; Endothelial NOS; eNOS; NOS type III
Protein Family	Nitric oxide synthase
UniProt Gene Name	NOS3
UniProt Synonym Gene Names	cNOS; eNOS; NOSIII
UniProt Entry Name	NOS3_HUMAN
NCBI Protein Information	nitric oxide synthase, endothelial; cNOS; EC-NOS; NOSIII; NOS type III; endothelial NOS; constitutive NOS
NCBI Summary for NOS3	Nitric oxide is a reactive free radical which acts as a biologic mediator in several processes, including neurotransmission and antimicrobial and antitumoral activities. Nitric oxide is synthesized from L-arginine by nitric oxide synthases. Variations in this gene are associated with susceptibility to coronary spasm. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]
UniProt Comments for NOS3	Function: Produces nitric oxide (NO) which is implicated in vascular smooth muscle relaxation through a cGMP-mediated signal transduction pathway. NO mediates vascular endothelial growth factor (VEGF)-induced angiogenesis in coronary vessels and promotes blood clotting through the activation of platelets. Ref.7Isoform eNOS13C: Lacks eNOS activity, dominant-negative form that may down-regulate eNOS activity by forming heterodimers with isoform 1. Ref.7 Catalytic activity: 2 L-arginine + 3 NADPH + 4 O2 = 2 L-citrulline + 2 nitric oxide + 3 NADP+ + 4 H2O. Cofactor: Heme group.Binds 1 FAD.Binds 1 FMN.Tetrahydrobiopterin (BH4). May stabilize the dimeric form of the enzyme. Enzyme regulation: Stimulated by calcium/calmodulin. Inhibited by NOSIP and NOSTRIN. Ref.20 Ref.21 Subunit structure: Homodimer. Interacts with NOSIP and NOSTRIN. Ref.20 Ref.21 Subcellular location: Cell membrane. Membrane › caveola. Cytoplasm › cytoskeleton. Golgi apparatus. Note: Specifically associates with actin cytoskeleton in the G2 phase of the cell cycle; which is favored by interaction with NOSIP and results in a reduced enzymatic activity. Ref.20 Ref.21 Ref.23 Ref.24 Tissue specificity: Platelets, placenta, liver and kidney. Ref.19 Post-translational modification: Phosphorylation by AMPK at Ser-1177 in the presence of Ca2+-calmodulin (CaM) activates activity. In absence of Ca2+-calmodulin, AMPK also phosphorylates Thr-495, resulting in inhibition of activity By similarity. Phosphorylation of Ser-114 by CDK5 reduces activity. Polymorphism: Variation in NOS3 seem to be associated with susceptibility to coronary spasm. Sequence similarities: Belongs to the NOS family.Contains 1 FAD-binding FR-type domain.Contains 1 flavodoxin-like domain.
Research Articles on NOS3	**1.** Nitric oxide supplementation suppresses amyloid-beta (Abeta) peptide and BACE1 protein levels in the cerebral microvessels of eNOS-deficient Alzheimer model mice.
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