ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

**Mouse Inducible Nitric Oxide Synthase 2 (iNOS/NOS-2) Protein**

Cat # iNOS-R | Mouse purified iNOS/NOS-2 protein | **SIZE**: 5 ug

Nitric oxide (NO), a diffusible free radical gas, acts as a neurotransmitter in brain and peripheral nervous system. It accounts for the activity of endothelium-derived relaxing factors, which stimulate vasodilatation by releasing NO from the endothelium. Unlike typical neurotransmitter, NO is a not stored in synaptic vesicle and does not act on membrane receptors. Synthesis of NO, initially demonstrated in vascular endothelium, is now found in many tissues.

NO is synthesized by L-arginine, oxygen, and NADPH by three known isoforms of heme-containing flavoproteins termed NO synthase (NOS, I-III, mol wt. ~130-160 kDa). One group of enzyme is constitutive, agonist-triggered, and dependent on Ca2+/Calmodulin and is inhibited by L-arginine analogues (L-NNA, L-NMMA). It is found in endothelium, adrenal glands, brain and platelets. The other principle group is inducible, $Ca^{2+}$/Calmodulin-independent, and inhibited by NMMA and L-NNA. It has been found in macrophage, hepatocytes, tumor cells, vascular smooth muscle and endothelial cells. Analyses of cDNA clones have identified three distinct NOS genes in mammals: neuronal (nNOS/bNOS/NOS-I), endothelial (eNOS/NOS-III), and macrophage (mNOS/iNOS/NOS-II). Both nNOS and eNOS are constitutive and the mNOS/iNOS is inducible. Sequence homology among different cloned isoforms is ~ 50%.

## Source of Antigen

Mouse iNOS protein was purified from activated murine macrophage cells using various biochemical and chromatographic technique. The purity of the protein is >95% (mol wt ~130 kda). It is supplied in 5 ug size in 100 mM HEPES buffer, pH 7.5, containing 20% glycerol. Biological activity of the iNOS has not been established.

Store at –80oC for 3-6 months in suitable size aliquot. Avoid repeated freeze and thaw.

**Shipping**: Dry ice.

## Recommended Usage

**Western Blotting**. Prepare INOS protein solution in SDS-PAGE sample buffer at desired concentration. Boil samples for 3-5 min at 95oC and cool before loading on gels. Load 200-500 ng protein per lane and detect with appropriate antibodies.

**ELISA**: Coat plates 1-5 ug/ml and detect with appropriate antibodies. The product can also be used as standards for ELISA.

**General References**: (1) Lowenstein CJ et al (1992) PNAS 89, 6711; Lyons CR et al (1992) J Biol Chem. 267, 6370; Zie Q-W (1992) Science 256, 225; Nunokawa Y et al (1993) BBRC 191, 89

**Citations of ADI antibodies to iNOS etc**

Xu, X et al, 2001, Biochemical Pharmacology, 59, 509-516; XU, X, 2001, European Journal of Pharmacology, 416, 1-9 WB, Grassellia, F.2001, Domestic Animal Endocrinol. 20, 241-252, WB

For In Vitro Research Use and Manufacturing Only.

## Related items

Antibodies to iNOS, eNOS, bNOS available.

INOS-R 71212A

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