Revision 1

Store at -20C

#2982

iNOS Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M	Endogenous	130	Rabbit	#P29477	18126

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

iNOS Antibody detects endogenous levels of total iNOS protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide sourrounding Ala1130 of mouse iNOS. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Nitric Oxide Synthase (NOS) catalyzes the formation of nitric oxide (NO) and citrulline from L-arginine, oxygen, and cofactors. Three family members have been characterized: neuronal NOS (nNOS), which is found primarily in neuronal tissue; inducible NOS (iNOS), which is induced by interferon gamma and lipopolysaccharides in the kidney and cardiovascular system; and endothelial NOS (eNOS), which is expressed in blood vessels (1). NO is a messenger molecule with diverse functions throughout the body, including the maintenance of vascular integrity, homeostasis, synaptic plasticity, long-term potentiation, learning, and memory (2,3).

NO catalyzed by iNOS is involved in host defense against protozoa, bacteria, fungi, and viruses. Unlike constitutively expressed eNOS and nNos, iNOS is not usually expressed in quiescent cells. iNOS is transcriptionally induced in response to bacterial endotoxins such as LPS and proinflammatory cytokines in macrophages and various other cell types. Transcription factors involved in iNOS transcription include NF-κB, AP-1, and STAT. Different signaling pathways either promote (Jak1/2, PKC, c-Raf, p38 MAP kinase, and p44/42 MAP kinase) or inhibit (PI3 kinase) iNOS expression depending on stimulus and cell type (4).

Background References

1. Tsutsui, M. (2004) *J Atheroscler Thromb* 11, 41-8.
2. Son, H. et al. (1996) *Cell* 87, 1015-23.
3. Hawkins, R.D. (1996) *Neuron* 16, 465-7.
4. Bogdan, C. (2001) *Nat Immunol* 2, 907-16.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

M: Mouse

Trademarks and Patents

Limited Uses

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