10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-nNOS Antibody
Catalog # AN2043

Specification

Anti-nNOS Antibody - Product Information

Primary Accession	P29475
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	160970

Anti-nNOS Antibody - Additional Information

Gene ID 4842

Other Names
neuronal nitric oxide synthase, BNOS, Constitutive NOS, IHPS1, N-NOS, Nitric oxide synthase 1, NOS type I, NC-NOS

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Anti-nNOS Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Anti-nNOS Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-nNOS Antibody - Images

Anti-nNOS Antibody - Background

Nitric oxide (NO) is a colorless, free radical gas that carries a variety of messages between cells. Vasorelaxation, [[URL:https://www.novusbio.com/research-areas/neuroscience/neurotransmission.html]][[Caption:neurotransmission]] and cytotoxicity can all be potentiated through cellular response

to NO. NO production is mediated by members of the nitric oxide synthase (NOS) family including the two constitutive isoforms: brain, bNOS, or neuronal NOS, [[URL:https://www.novusbio.com/common-name/nnos]][[Caption:nNOS]] (type I) and endothelial cell NOS, [[URL:https://www.novusbio.com/common-name/enos]][[Caption:eNOS]] (type III); along with the inducible isoform, [[URL:https://www.novusbio.com/common-name/inos]][[Caption:iNOS]] (type II). NOS catalyzes the oxidization of L-arginine to produce L-citrulline and NO, requiring the cofactors [[URL:https://www.novusbio.com/common-name/calmodulin]][[Caption:calmodulin]], nicotinamide adenine dinucleotide phosphate (NADPH), flavin adenine dinucleotide (FAD), and flavin mononucleotide (FMN), [[URL:https://www.novusbio.com/common-name/heme]][[Caption:heme]], and [[URL:https://www.novusbio.com/common-name/tetrahydrobiopterin]][[Caption:tetrahydrobiopterin]] (1). The 131 kDa enzyme, iNOS, is found in a variety of cell types including macrophages, hepatocytes, synoviocytes, and smooth muscle cells. While constitutively expressed in kidneys, in other tissues iNOS is induced by bacterial lipopolysaccharides (LPS), growth factors, and [[URL:https://www.novusbio.com/research-areas/immunology/chemokines-cytokines]][[Caption:cytokines]] such as [[URL:https://www.novusbio.com/common-name/ifn-gamma]][[Caption:IFN-gamma]], [[URL:https://www.novusbio.com/common-name/tnf-alpha]][[Caption:TNF]], [[URL:https://www.novusbio.com/common-name/il-1-beta-il-1f2]][[Caption:IL-1]] and [[URL:https://www.novusbio.com/common-name/il-2]][[Caption:IL-2]]. iNOS is not regulated by the level of intracellular Ca2+ and is constantly active as a dimer when expressed. iNOS activity is elevated in a variety of diseases including atherosclerosis, heart failure, sepsis, solid tumors, and [[URL:https://www.novusbio.com/research-areas/lipid-and-metabolism-diabetes-research.html]][[Caption:type 2 diabetes]]. Acting as a critical mediator of [[URL:https://www.novusbio.com/research-areas/immunology/inflammation]][[Caption:inflammation]] and [[URL:https://www.novusbio.com/research-areas/apoptosis]][[Caption:apoptosis]], iNOS inhibitors have been shown to alleviate obesity and stress inducted insulin resistance in mouse models (2,3).

References1. Forstermann U, and Sessa WC. (2012) Nitric oxide synthases: regulation and function. Eur Heart J. 33(7): 829-837. PMID: 218904892. Aktan F. (2004) iNOS-mediated nitric oxide production and its regulation. Life Sci. 75(6):639-53. PMID: 151721743. Cinelli MA, Do HT, Miley GP, Silverman RB. (2020) Inducible nitric oxide synthase: Regulation, structure, and inhibition. Med Res Rev. 40(1):158-189. PMID: 31192483