

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 InformationGene 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 Cytometry](#)
- [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, [\[\[URL:https://www.novusbio.com/research-areas/neuroscience/neurotransmission.html\]\]](https://www.novusbio.com/research-areas/neuroscience/neurotransmission.html) 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, [\[\[URL:https://www.novusbio.com/common-name/nnos\]\]](https://www.novusbio.com/common-name/nnos) [\[\[Caption:nNOS\]\]](#) (type I) and endothelial cell NOS, [\[\[URL:https://www.novusbio.com/common-name/enos\]\]](https://www.novusbio.com/common-name/enos) [\[\[Caption:eNOS\]\]](#) (type III); along with the inducible isoform, [\[\[URL:https://www.novusbio.com/common-name/inos\]\]](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 [\[\[URL:https://www.novusbio.com/common-name/calmodulin\]\]](https://www.novusbio.com/common-name/calmodulin) [\[\[Caption:calmodulin\]\]](#), nicotinamide adenine dinucleotide phosphate (NADPH), flavin adenine dinucleotide (FAD), and flavin mononucleotide (FMN), [\[\[URL:https://www.novusbio.com/common-name/heme\]\]](https://www.novusbio.com/common-name/heme) [\[\[Caption:heme\]\]](#), and [\[\[URL:https://www.novusbio.com/common-name/tetrahydrobiopterin\]\]](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 [\[\[URL:https://www.novusbio.com/research-areas/immunology/chemokines-cytokines\]\]](https://www.novusbio.com/research-areas/immunology/chemokines-cytokines) [\[\[Caption:cytokines\]\]](#) such as [\[\[URL:https://www.novusbio.com/common-name/ifn-gamma\]\]](https://www.novusbio.com/common-name/ifn-gamma) [\[\[Caption:IFN-gamma\]\]](#), [\[\[URL:https://www.novusbio.com/common-name/tnf-alpha\]\]](https://www.novusbio.com/common-name/tnf-alpha) [\[\[Caption:TNF\]\]](#), [\[\[URL:https://www.novusbio.com/common-name/il-1-beta-il-1f2\]\]](https://www.novusbio.com/common-name/il-1-beta-il-1f2) [\[\[Caption:IL-1\]\]](#) and [\[\[URL:https://www.novusbio.com/common-name/il-2\]\]](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 [\[\[URL:https://www.novusbio.com/research-areas/lipid-and-metabolism-diabetes-research.html\]\]](https://www.novusbio.com/research-areas/lipid-and-metabolism-diabetes-research.html) [\[\[Caption:type 2 diabetes\]\]](#). Acting as a critical mediator of [\[\[URL:https://www.novusbio.com/research-areas/immunology/inflammation\]\]](https://www.novusbio.com/research-areas/immunology/inflammation) [\[\[Caption:inflammation\]\]](#) and [\[\[URL:https://www.novusbio.com/research-areas/apoptosis\]\]](https://www.novusbio.com/research-areas/apoptosis) [\[\[Caption:apoptosis\]\]](#), iNOS inhibitors have been shown to alleviate obesity and stress induced insulin resistance in mouse models (2,3).
References
1. 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