Alexa Fluor® 488 anti-NOS3 (eNOS) Antibody

Catalog# / Size	626755 / 25 tests 626756 / 100 tests
Clone	W22110B
Regulatory Status	RUO
Other Names	Nitric oxide synthase 3 (NOS3), Endothelial Nos (eNos), constitutive NOS (cNOS)
Isotype	Rat IgG2b, κ
Description	Nitric oxide synthase 3 (NOS3), also commonly known as endothelial nitric oxide synthase (eNOS), is a critical enzyme primarily found in the endothelial cells lining the blood vessels. Its main function is to catalyze the formation of nitric oxide (NO) from L-arginine. NO is a signaling molecule with profound effects on vascular health and overall physiology, regulating blood vessel tone and diameter in response to various physiological cues including shear stress, neurotransmitters, and hormones. NO relaxes and dilates blood vessels, thereby promoting proper blood flow and reducing blood pressure. Additionally, NOS3-derived NO helps prevent the formation of blood clots, reduces inflammation in the blood vessel walls, and maintains vascular homeostasis, contributing significantly to cardiovascular health. Dysfunction or impaired activity of NOS3 is implicated in various cardiovascular diseases, making it an important target for therapeutic interventions aimed at preserving vascular function.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Recombinant KLH-conjugated peptide fragment of human NOS3
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze**.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 0.125 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 nm)
RRID	AB_3683475 (BioLegend Cat. No. 626755) AB_3683475 (BioLegend Cat. No. 626756)

Antigen Details

Structure	NOS3 is a 1205 amino acid protein with a predicted molecular weight of 133.3 kD.
Distribution	Cytoplasmic, vascular endothelial cells
Function	Enzyme, nitric oxide (NO) synthesis from L-arginine. Transcriptionally regulated by SP1, SP3, ETS-1, YY1.
Interaction	NOS3 is regulated via binding of its cofactor BH4, which is required to efficiently produce NO.
Cell Type	Endothelial cells
Biology Area	Cardiovascular Biology
Molecular Family	Enzymes and Regulators
Antigen References	1. Mineo C and Shaul PW. 2012. *Adv Exp Med Biol.* 729:51-62. 2. Hong FF, *et al*. 2019. *Inflamm Res*. 68:429-441. 3. Siragusa M and Fleming I. 2016. *Pfulgers Arch*. 468:1125-1137. 4. Musicki B and Burnett AL 2006. *Exp Bil Med.* 231:154-65.
Gene ID	4846

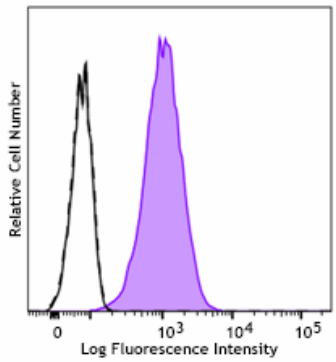
Related Protocols

- Intracellular Flow Cytometry Staining Protocol

Other Formats

Purified anti-NOS3 (eNOS), Alexa Fluor® 488 anti-NOS3 (eNOS), Alexa Fluor® 647 anti-NOS3 (eNOS)

Product Data



EA.hy926 cells (positive cell line, filled histogram) and HeLa cells (negative cell line, open histogram) were fixed and permeabilized using Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803) and intracellularly stained with Alexa Fluor® 488 Anti-NOS3 (eNOS) (clone W22110B) or Alexa Fluor® 488 Rat IgG2b, κ Isotype Control Antibody (open histogram, dashed line) (Cat No. 400625).

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