

## Alexa Fluor® 647 anti-NOS3 (eNOS) Antibody

<b>Catalog# / Size</b>	626753 / 25 µg 626754 / 100 µg
<b>Clone</b>	W22110B
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Nitric oxide synthase 3 (NOS3), Endothelial Nos (eNos), constitutive NOS (cNOS)
<b>Isotype</b>	Rat IgG2b, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	Recombinant KLH-conjugated peptide fragment of human NOS3
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">IHC-P - Quality tested</a> <a href="#">ICFC - Verified</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 1.0 - 10.0 µg/mL is suggested. For flow cytometric staining, the suggested use of this reagent is ≤ 0.03 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	For use of this antibody in immunohistochemistry on formalin-fixed paraffin embedded tissues (IHC-P), we recommend antigen retrieval using either Citrate Buffer, 10X (Cat. No. 420902), or Tris-EDTA pH 9.0 Antigen Retrieval Buffer (Cat. No. 422704).
<b>RRID</b>	AB_3683474 (BioLegend Cat. No. 626753) AB_3683474 (BioLegend Cat. No. 626754)

## Antigen Details

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<b>Structure</b>	NOS3 is a 1205 amino acid protein with a predicted molecular weight of 133.3 kD.
<b>Distribution</b>	Cytoplasmic, vascular endothelial cells
<b>Function</b>	Enzyme, nitric oxide (NO) synthesis from L-arginine. Transcriptionally regulated by SP1, SP3, ETS-1, YY1.
<b>Interaction</b>	NOS3 is regulated via binding of its cofactor BH4, which is required to efficiently produce NO.
<b>Cell Type</b>	Endothelial cells
<b>Biology Area</b>	Cardiovascular Biology
<b>Molecular Family</b>	Enzymes and Regulators
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Mineo C and Shaul PW. 2012. <i>Adv Exp Med Biol.</i> 729:51-62.</li><li>2. Hong FF, <i>et al.</i> 2019. <i>Inflamm Res.</i> 68:429-441.</li><li>3. Siragusa M and Fleming I. 2016. <i>Pfulgers Arch.</i> 468:1125-1137.</li><li>4. Musicki B and Burnett AL. 2006. <i>Exp Bil Med.</i> 231:154-65.</li></ol>

**Gene ID** [4846](#)

## Related Protocols

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- [Intracellular Flow Cytometry Staining Protocol](#)
- [Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

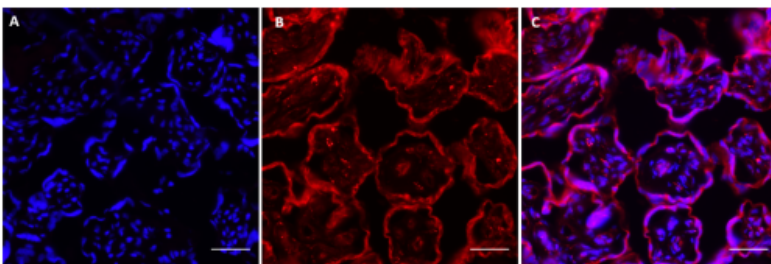
## Other Formats

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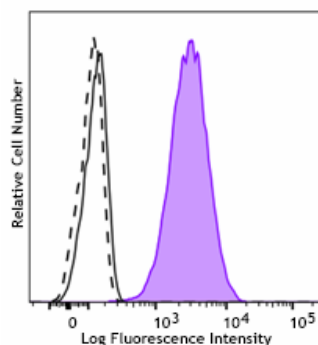
Purified anti-NOS3 (eNOS), Alexa Fluor® 488 anti-NOS3 (eNOS), Alexa Fluor® 647 anti-NOS3 (eNOS)

## Product Data

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IHC staining with Alexa Fluor® 647 anti-NOS3 (eNOS) (clone W22110B) was performed on formalin-fixed paraffin-embedded human endometrium tissue following antigen retrieval using Tris-EDTA pH 9.0 Antigen Retrieval Buffer (Cat. No. 422704). The tissue sections were incubated with Alexa Fluor® 647 Rat IgG2b,  $\kappa$  Isotype Control (Cat. No. 400626) (panel A) or with Alexa Fluor® 647 anti-NOS3 (eNOS) (clone W22110B) (panels B and C). Nuclei were counterstained with DAPI (Cat. No. 422801) (panels A and C). Scale Bar: 50  $\mu$ m



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® 647 anti-NOS3 (eNOS) (clone W22110B) or Alexa Fluor® 647 Rat IgG2b,  $\kappa$  Isotype Control Antibody (open histogram, dashed line) (Cat. No. 400626).

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