



## Product datasheet

### Anti-eNOS antibody ab5589

★★★★★ [8 Abreviews](#) [110 References](#) [4 Images](#)

#### Overview

<b>Product name</b>	Anti-eNOS antibody
<b>Description</b>	Rabbit polyclonal to eNOS
<b>Host species</b>	Rabbit
<b>Specificity</b>	This antibody does not detect human inducible NOS or rat brain nNOS. ab5589 has been successfully used in Western blot and immunohistochemistry (paraffin and frozen) procedures. By Western blot, this antibody detects an ~140 kDa protein representing eNOS from human endothelial cells. Immunohistochemical staining of eNOS in Human vascular endothelial cells with ab5589 results in prominent staining of the epithelial cells.
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide corresponding to Human eNOS aa 1179-1194. Sequence: SLQERQLRGAVPWAFD <div>  <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a> </div>
<b>Positive control</b>	IHC-P: Human lung, placenta and spleen tissues. WB: HUVEC and RAW 264.7 cell lysates; Rat and mouse placenta tissues.
<b>General notes</b>	<p>We have received mixed feedback from customers regarding rat specificity; this is why we are temporarily removing Rat from tested species list and no longer guarantee it. Our laboratory is currently testing new lots so please contact our scientific support team (<a href="mailto:technical@abcam.com">technical@abcam.com</a>) for more information.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

<b>Form</b>	Liquid
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<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

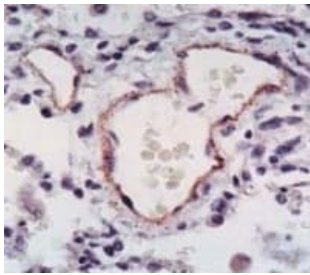
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab5589 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100. Antigen retrieval is not essential but may optimise staining.
WB	★★★★★ (5)	1/1000. Predicted molecular weight: 133 kDa. By Western blot ab5589 also detects eNOS in canine cardiac microsomes. 5% BSA in TBST is recommended as blocking buffer.

## Target

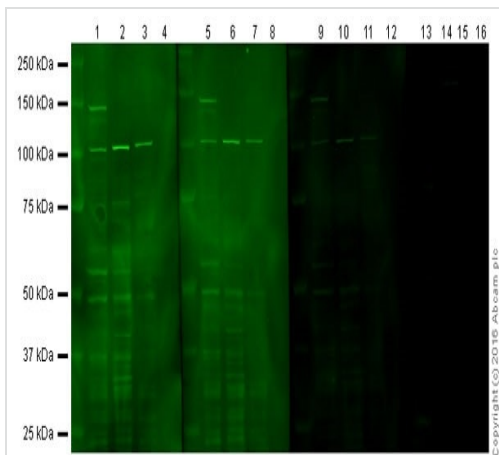
<b>Function</b>	Produces nitric oxide (NO) which is implicated in vascular smooth muscle relaxation through a cGMP-mediated signal transduction pathway. NO mediates vascular endothelial growth factor (VEGF)-induced angiogenesis in coronary vessels and promotes blood clotting through the activation of platelets. Isoform eNOS13C: Lacks eNOS activity, dominant-negative form that may down-regulate eNOS activity by forming heterodimers with isoform 1.
<b>Tissue specificity</b>	Platelets, placenta, liver and kidney.
<b>Involvement in disease</b>	Variation in NOS3 seem to be associated with susceptibility to coronary spasm.
<b>Sequence similarities</b>	Belongs to the NOS family. Contains 1 FAD-binding FR-type domain. Contains 1 flavodoxin-like domain.
<b>Post-translational modifications</b>	Phosphorylation by AMPK at Ser-1177 in the presence of Ca(2+)-calmodulin (CaM) activates activity. In absence of Ca(2+)-calmodulin, AMPK also phosphorylates Thr-495, resulting in inhibition of activity (By similarity). Phosphorylation of Ser-114 by CDK5 reduces activity.
<b>Cellular localization</b>	Cell membrane. Membrane, caveola. Cytoplasm, cytoskeleton. Golgi apparatus. Specifically associates with actin cytoskeleton in the G2 phase of the cell cycle and which is favored by interaction with NOSIP and results in a reduced enzymatic activity.

## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eNOS antibody (ab5589)

Immunolocalization of eNOS in human lung tissue using ab5589.



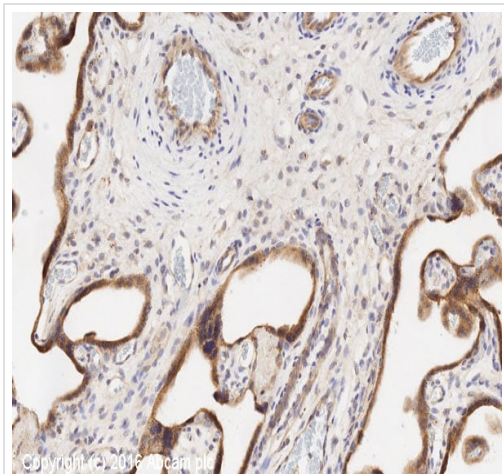
Western blot - Anti-eNOS antibody (ab5589)

**Lanes 1-4 :** Anti-eNOS antibody (ab5589) at 1/200 dilution  
**Lanes 5-8 :** Anti-eNOS antibody (ab5589) at 1/600 dilution  
**Lanes 9-12 :** Anti-eNOS antibody (ab5589) at 1/1800 dilution  
**Lanes 13-16 :** Anti-eNOS antibody (ab5589) at 1/5400 dilution

**Lane 1 :** HUVEC (Human umbilical vein endothelial cell line) whole cell lysate  
**Lane 2 :** RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate  
**Lanes 3 & 7 & 11 :** Mouse placenta tissue lysate  
**Lanes 4 & 8 & 12 & 16 :** Rat placenta tissue lysate  
**Lanes 5 & 9 & 13 :** HUVEC whole cell lysate  
**Lanes 6 & 10 & 14 :** RAW 264.7 whole cell lysate  
**Lane 15 :** Mouse Placenta

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 133 kDa  
**Observed band size:** 140 kDa

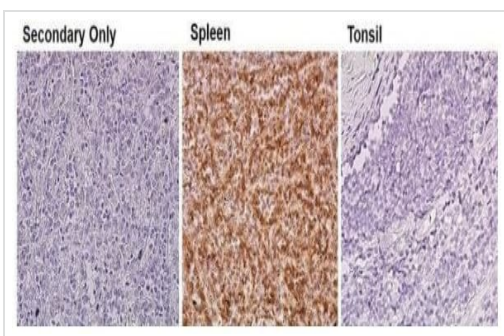


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eNOS antibody (ab5589)

IHC image of eNOS staining in human placenta formalin fixed paraffin embedded tissue section\*, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab5589, 1/100, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*\*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre*



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eNOS antibody (ab5589)

The specificity of ab5589 was demonstrated using naturally occurring variable expression to confirm specificity.

Immunohistochemistry analysis of human tissue sections using this antibody showed eNOS is strongly stained in human spleen tissue and no staining in human tonsil tissue which does not express eNOS.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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