abcam

ab239990

# Anti-iNOS antibody [SP126] - BSA and Azide free

Anti-iNOS antibody [SP126] - BSA and Azide free (ab239990) is a rabbit recombinant monoclonal antibody provided in a PBS only buffer for easy conjugation detecting iNOS in **Flow Cytometry (Intra), IHC-P**. Suitable for **Human, Mouse**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | SP126 |
| **Purification technique** | Affinity purification Protein A/G |
| **Specificity** | Not suitable for mouse IHC-P. |
| **Concentration** | 1.024 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Purified from TCS by Protein A/G. |

# Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | Boil tissue section in Citrate buffer, pH 6.0 for 10 minutes followed by cooling at room temperature for 20 minutes.Incubate with primary antibody for 10 minutes at room temperature. |

### Not recommended

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | Boil tissue section in Citrate buffer, pH 6.0 for 10 minutes followed by cooling at room temperature for 20 minutes.Incubate with primary antibody for 10 minutes at room temperature. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |

| | |
|---|---|
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## ELISA

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information NOS2

**Function** Produces nitric oxide (NO) which is a messenger molecule with diverse functions throughout the body (PubMed:7504305, PubMed:7531687, PubMed:7544004, PubMed:7682706). In macrophages, NO mediates tumoricidal and bactericidal actions. Also has nitrosylase activity and mediates cysteine S-nitrosylation of cytoplasmic target proteins such PTGS2/COX2 (By similarity). As component of the iNOS-S100A8/9 transnitrosylase complex involved in the selective inflammatory stimulus-dependent S-nitrosylation of GAPDH on 'Cys-247' implicated in regulation of the GAIT complex activity and probably multiple targets including ANXA5, EZR, MSN and VIM (PubMed:25417112). Involved in inflammation, enhances the synthesis of pro-inflammatory mediators such as IL6 and IL8 (PubMed:19688109).

# Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

**What is this antibody validated in?**
Anti-iNOS antibody [SP126] - BSA and Azide free (ab239990) is a rabbit recombinant monoclonal antibody and is validated for use in Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P) in Human, Mouse samples.

**Collaboration**
Anti-iNOS [SP126] - BSA and Azide free (ab239990) is a clone from the portfolio of Spring Bioscience (Roche) SP clones which have been optimised for immunohistochemistry (IHC).

**Other related products**
We have a range of other formats of antibody clone [SP126] also available for your convenience: ab115819, Carrier free - ab239990, ab279573, Alexa Fluor® 488 - ab317527, Alexa Fluor® 750 - ab320971, APC - ab310816, PE - ab310895, Alexa Fluor® 594 - ab311661, Alexa Fluor® 568 - ab312935

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | Inducible Nitric Oxide Synthase commonly referred to as iNOS or NOS2 is an important enzyme in the production of nitric oxide (NO) from L-arginine. This enzyme has a molecular weight of approximately 130 kDa and is expressed in various cell types including macrophages and hepatocytes. iNOS becomes active in response to inflammatory stimuli and can produce large amounts of NO for extended periods. Western blotting and iNOS ELISA kits are frequently used methods to detect and quantify the presence and activity of iNOS in different biological samples. |
| **Biological function summary** | INOS plays a significant role in the immune system by participating in the defense against pathogens. The enzyme is part of a molecular complex that generates NO which acts as a signaling molecule and has antimicrobial properties. iNOS activity is induced during immune responses and contributes to the elimination of bacteria and viruses through the production of reactive nitrogen species. Its expression is tightly regulated by cytokines and other signaling molecules that modulate the extent of its action. |
| **Pathways** | INOS integrates into the nitric oxide signaling pathway and is closely associated with inflammatory pathways. NO serves as a messenger within the nitric oxide signaling pathway facilitating processes like vasodilation and neurotransmission. iNOS works alongside other proteins such as cytokines like interferon-gamma that elevate its activity during inflammation and immune responses. The regulation of iNOS expression and activity plays an essential role in maintaining immune homeostasis and ensuring proper response to infections. |
| **Associated diseases and disorders** | INOS is linked to conditions characterized by excessive inflammation such as rheumatoid arthritis and sepsis. In these diseases overproduction of nitric oxide by iNOS can lead to tissue damage and exacerbate symptoms. Additionally iNOS is associated with the protein TNF-alpha as its expression is often driven by inflammatory mediators during disease states. Understanding the role of iNOS in such conditions provides insights into potential therapeutic targets for managing inflammatory diseases. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

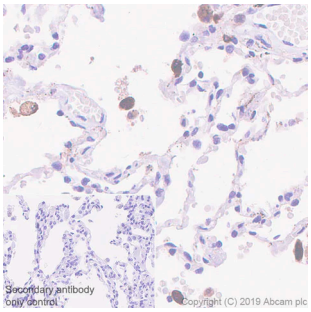
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

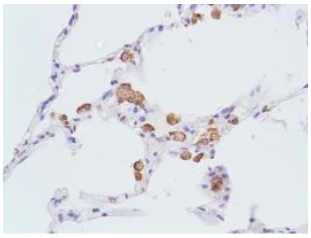
## 5 product images




### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-iNOS antibody [SP126] - BSA and Azide free (ab239990)

INOS Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-iNOS antibody

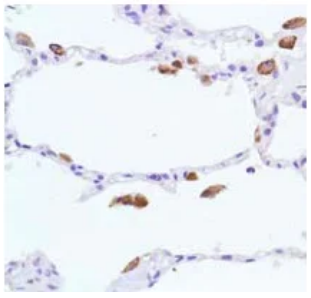
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung tissue sections labeling iNOS with Purified ab115819 at 1/100 dilution (0.65 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval using sodium citrate buffer, pH 6.0. Goat Anti-Rabbit IgG H&L (HRP) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115819)



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-iNOS antibody [SP126] - BSA and Azide free (ab239990)

INOS Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-iNOS antibody

Formalin-fixed, paraffin-embedded human lung stained for iNOS using ab115819 at a dilution of 1/100 in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab115819).

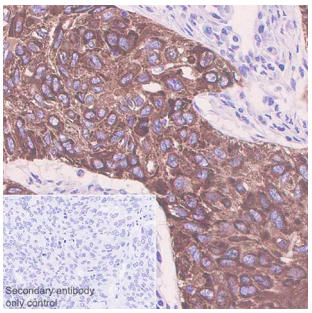


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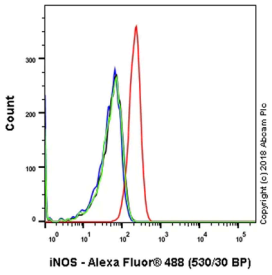
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INOS Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-iNOS antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung carcinoma tissue sections labeling iNOS with Purified ab115819 at 1/100 dilution (0.65 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval using sodium citrate buffer, pH 6.0. Goat Anti-Rabbit IgG H&L (HRP) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115819)




## Flow Cytometry (Intracellular) - Anti-iNOS antibody [SP126] - BSA and Azide free (ab239990)

INOS Flow Cytometry (Intracellular) staining using rabbit Anti-iNOS antibody

Intracellular Flow Cytometry analysis of Raw264.7 cells treated with 0.1ug/ml Lipopolysaccharides for 24hours labeling iNOS with purified ab115819 at 1/200 dilution (0.48µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115819).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.