abcam

ab247891

# Anti-NOXA2/p67phox antibody [EPR5065] - BSA and Azide free

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** | EPR5065 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.977 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

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

## IP

**Not recommended**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information NCF2

| | |
|---|---|
| **Function** | Subunit of the phagocyte NADPH oxidase complex that mediates the transfer of electrons from cytosolic NADPH to O2 to produce the superoxide anion (O2(-)) (PubMed:12207919, PubMed:38355798). In the activated complex, electrons are first transferred from NADPH to flavin adenine dinucleotide (FAD) and subsequently transferred via two heme molecules to molecular oxygen, producing superoxide through an outer-sphere reaction (PubMed:38355798). Activation of the NADPH oxidase complex is initiated by the assembly of cytosolic subunits of the NADPH oxidase complex with the core NADPH oxidase complex to form a complex at the plasma membrane or phagosomal membrane (PubMed:38355798). This activation process is initiated by phosphorylation dependent binding of the cytosolic NCF1/p47-phox subunit to the C-terminus of CYBA/p22-phox (By similarity). |

## 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

ab247891 is the carrier-free version of ab109523.

**Species reactivity**

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

**Patented technology**

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**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** | NOXA2 also known as p67phox is a subunit of the NADPH oxidase complex essential in producing reactive oxygen species (ROS). The protein weighs about 67 kilodaltons and is expressed in phagocytic cells like neutrophils and macrophages. NOXA2/p67phox interacts closely with other subunits of the NADPH oxidase complex playing a critical role in oxidative burst which is essential in the immune response against pathogens. |
| **Biological function summary** | NOXA2 contributes to superoxide production by facilitating electron transfer in the NADPH oxidase complex. This complex is integral to the immune system's ability to target and destroy infectious agents. NOXA2/p67phox forms a complex with other components such as gp91phox and p22phox which are required for full activation of the oxidase. The coordinated action of these complexes ensures effective ROS production which is a vital component of the defense mechanism of immune cells. |
| **Pathways** | NOXA2 participates in the respiratory burst pathway an important element of innate immunity. This pathway involves the conversion of oxygen to superoxide a process requiring precise interaction with cytochrome b558 and the Rac protein. NOXA2 is also related to signal transduction pathways including those modulated by protein kinase C which further regulates its activation during the immune response. The orchestration of these pathways allows for an effective immune defense mechanism. |
| **Associated diseases and disorders** | NOXA2 is implicated in chronic granulomatous disease (CGD) where mutations in the components of the NADPH oxidase complex impair ROS production. This leads to frequent infections due to deficient pathogen clearance. NOXA2 is also linked to inflammatory disorders due to its role in excessive ROS production. In that context it connects with other proteins such as p47phox which are also involved in both normal and aberrant immune responses. |

## 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.

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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.

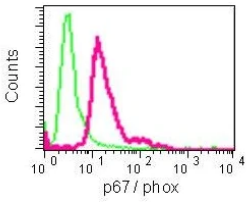
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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

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## 3 product images

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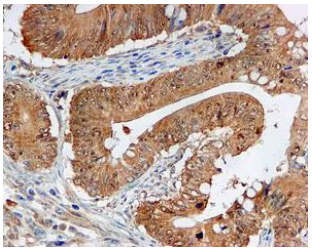



### Flow Cytometry (Intracellular) - Anti-NOXA2/p67phox antibody [EPR5065] - BSA and Azide free (ab247891)

NOXA2/p67phox Flow Cytometry (Intracellular) staining using rabbit Anti-NOXA2/p67phox antibody

This data was developed using ab109523, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of permeabilized THP-1 cells using ab109523 (red) and a rabbit IgG (negative contol) (green). The dilution is 1/150. The secondary antibody is a goat anti-rabbit IgG FITC.

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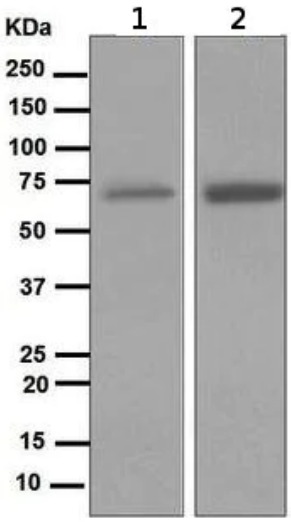
### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NOXA2/p67phox antibody [EPR5065] - BSA and Azide free (ab247891)

NOXA2/p67phox Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NOXA2/p67phox antibody

This data was developed using ab109523, the same antibody clone in a different buffer formulation.
ab109523, at a 1/500 dilution, staining Human NOXA2/p67phox in colon, using Immunohistochemistry, Formalin/PFA-fixed paraffin-embedded tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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# Western blot - Anti-NOXA2/p67phox antibody [EPR5065] - BSA and Azide free (ab247891)

This data was developed using ab109523, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-NOXA2/p67phox antibody [EPR5065] (ab109523) at 1/10000 dilution

Lane 1:
THP-1 cell lysate at 10 µg

Lane 2:
HL-60 treated with Dexomethasone and TPA cell lysate at 10 µg

Predicted band size: 60 kDa

Observed band size: 67 kDa

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