

**Anti-NOX2/gp91phox antibody**  
**Catalog # ABO10057****Specification****Anti-NOX2/gp91phox antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">P04839</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for NOX2/gp91phox detection. Tested with WB, Direct ELISA in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-NOX2/gp91phox antibody - Additional Information**

**Gene ID** 1536

**Other Names**

Cytochrome b-245 heavy chain, 1.-.-., CGD91-phox, Cytochrome b(558) subunit beta, Cytochrome b558 subunit beta, Heme-binding membrane glycoprotein gp91phox, NADPH oxidase 2, Neutrophil cytochrome b 91 kDa polypeptide, Superoxide-generating NADPH oxidase heavy chain subunit, gp91-1, gp91-phox, p22 phagocyte B-cytochrome, CYBB, NOX2

**Application Details**

Western blot, 0.1-0.5 µg/ml<br> Direct ELISA, 0.1-0.5 µg/ml<br>

**Subcellular Localization**

Cell membrane; Multi-pass membrane protein.

**Tissue Specificity**

Detected in neutrophils (at protein level).

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**Immunogen**

E. coli-derived human NOX2/gp91phox recombinant protein (Position: F416-D500).

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C; for one year. After r°Constitution, at 4°C; for one month. It°Can also be**

**aliquotted and stored frozen at -20°C; for a longer time. Avoid repeated freezing and thawing.**

## **Anti-NOX2/gp91phox antibody - Protein Information**

**Name** CYBB ([HGNC:2578](#))

**Synonyms** NOX2

### **Function**

Catalytic subunit of the phagocyte NADPH oxidase complex that mediates the transfer of electrons from cytosolic NADPH to O<sub>2</sub> to produce the superoxide anion (O<sub>2</sub><sup>-</sup>) (PubMed:<a href="http://www.uniprot.org/citations/15338276" target="\_blank">15338276</a>, PubMed:<a href="http://www.uniprot.org/citations/36241643" target="\_blank">36241643</a>, PubMed:<a href="http://www.uniprot.org/citations/36413210" target="\_blank">36413210</a>, PubMed:<a href="http://www.uniprot.org/citations/38355798" target="\_blank">38355798</a>). 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 (Probable) (PubMed:<a href="http://www.uniprot.org/citations/38355798" target="\_blank">38355798</a>). 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:<a href="http://www.uniprot.org/citations/19028840" target="\_blank">19028840</a>, PubMed:<a href="http://www.uniprot.org/citations/38355798" target="\_blank">38355798</a>). 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). NADPH oxidase complex assembly is impaired through interaction with NRROS (By similarity).

### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Note=As unassembled monomer may localize to the endoplasmic reticulum

### **Tissue Location**

Detected in neutrophils (at protein level).

## **Anti-NOX2/gp91phox antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **Anti-NOX2/gp91phox antibody - Images**

## **Anti-NOX2/gp91phox antibody - Background**

NOX2(NADPH OXIDASE 2), also called CYBB(CYTOCHROME b(-245), BETA SUBUNIT), p91-PHOX or

GP91-1, is a human gene encoding a glycoprotein. NOX2 is an essential component of phagocytic NADPH-oxidase, a membrane-bound enzyme complex that generates large quantities of microbicidal superoxide and other oxidants upon activation. It is mapped on Xp11.4. NOX2 assembled on DC phagosomes in a gp91-phox subunit-dependent manner, and that reactive oxygen species were produced in a more sustained manner in immature DC phagosomes than in macrophage phagosomes. As a major player in innate immune responses in neutrophils, NOX2 is also involved in adaptive immunity through its activity in DCs. In heart cells, physiologic stretch rapidly activates reduced-form NOX2 to produce reactive oxygen species (ROS) in a process dependent on microtubules (X-ROS signaling).