

Anti-NOX2/gp91phox Antibody
Catalog # ABO10982**Specification****Anti-NOX2/gp91phox Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	P04839
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Cytochrome b-245 heavy chain(CYBB) detection. Tested with WB, IHC-P 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

Calculated MW

65336 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization

Cell membrane; Multi-pass membrane protein.

Tissue Specificity

Detected in neutrophils (at protein level). .

Protein Name

Cytochrome b-245 heavy chain

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human NOX2(442-459aa

YWLCRDTHAFEWFADLLQ), identical to the related rat and mouse sequences.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, 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.

Sequence Similarities

Contains 1 FAD-binding FR-type domain.

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 O₂ to produce the superoxide anion (O₂⁻) (PubMed: [15338276](http://www.uniprot.org/citations/15338276), PubMed: [36241643](http://www.uniprot.org/citations/36241643), PubMed: [36413210](http://www.uniprot.org/citations/36413210), PubMed: [38355798](http://www.uniprot.org/citations/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 (Probable) (PubMed: [38355798](http://www.uniprot.org/citations/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: [19028840](http://www.uniprot.org/citations/19028840), PubMed: [38355798](http://www.uniprot.org/citations/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). 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

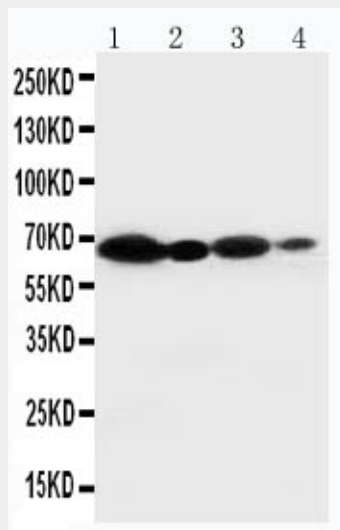
Detected in neutrophils (at protein level).

Anti-NOX2/gp91phox Antibody - Protocols

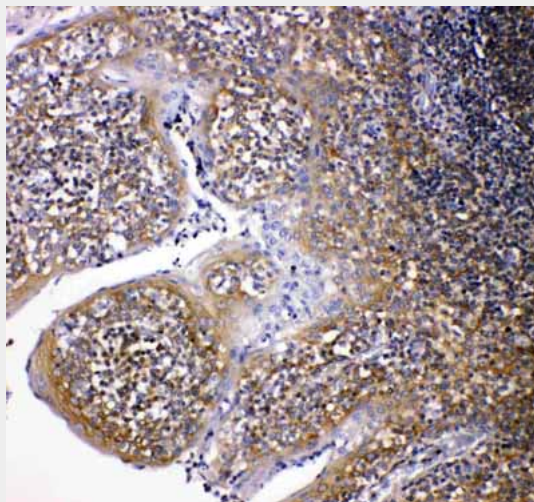
Provided below are standard protocols that you may find useful for product applications.

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

Anti-NOX2/gp91phox Antibody - Images



Anti-NOX2/gp91phox antibody, ABO10982, Western blotting Lane 1: HELA Cell Lysate Lane 2: JURKAT Cell Lysate Lane 3: MCF-7 Cell Lysate Lane 4: SMMC Cell Lysate



Anti-NOX2/gp91phox antibody, ABO10982, IHC(P) IHC(P): Human Intestinal Cancer Tissue

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 is a heterodimer composed of an alpha chain of relative molecular mass 23 kD and a beta chain of 76 to

82 kD. 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).