

**NOX2 Antibody**  
Catalog # ASC11833**Specification****NOX2 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P04839</a>
Other Accession	<a href="#">NP_000388</a> , <a href="#">1536</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 59, 63 kDa

Application Notes	<b>Observed: 58 kDa KDa</b> NOX2 antibody can be used for detection of NOX2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 2 µg/mL. For immunofluorescence start at 20 µg/mL.
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**NOX2 Antibody - Additional Information**Gene ID **1536****Target/Specificity**

Rabbit polyclonal NOX2 antibody was raised against a 15 amino acid peptide near the amino terminus of human NOX2. <br><br>The immunogen is located within amino acids 140 - 190 of NOX2.

**Reconstitution & Storage**

NOX2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

NOX2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**NOX2 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

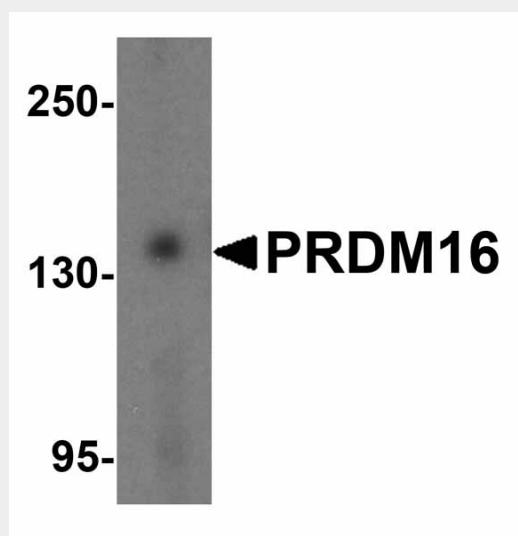
Detected in neutrophils (at protein level).

#### NOX2 Antibody - Protocols

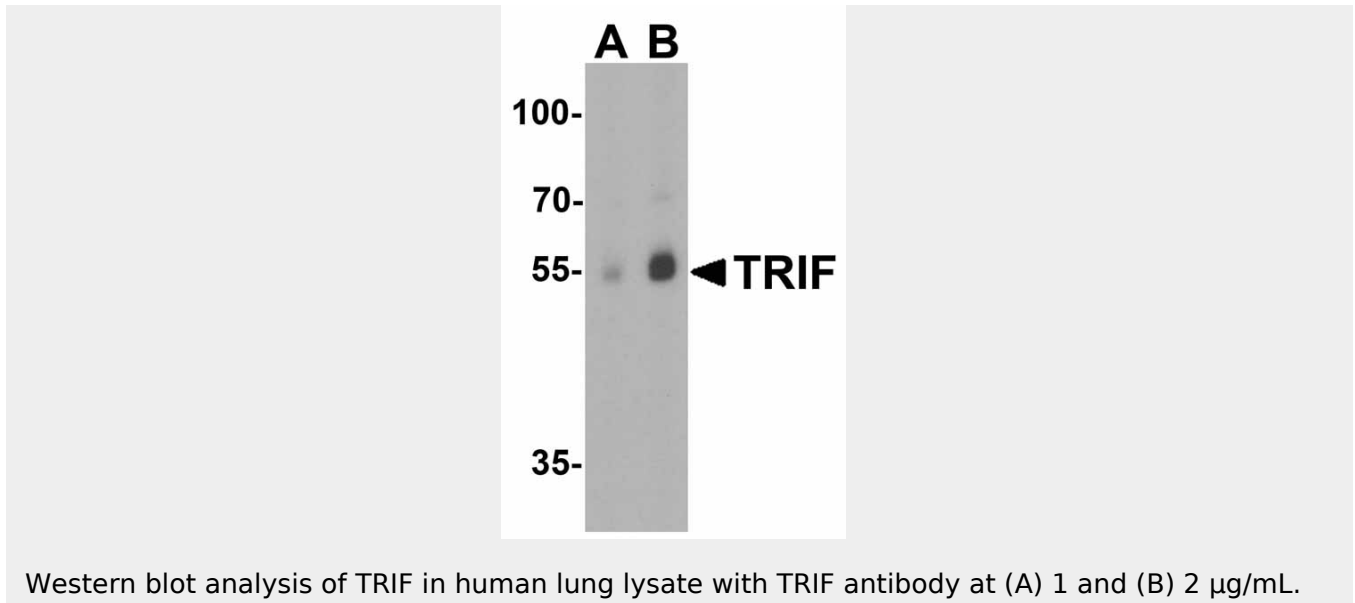
Provided below are standard protocols that you may find useful for product applications.

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

#### NOX2 Antibody - Images



Western blot analysis of PRDM16 in K562 cell lysate with PRDM16 antibody at 1 µg/mL.



### **NOX2 Antibody - Background**

The NOX family of NADPH oxidases is comprised of seven transmembrane proteins that oxidize intracellular NADPH/NADH, causing electron transport across the membrane and the reduction of molecular oxygen to superoxide (1). NOX2, also known as cytochrome b beta (CYBB) is one of two proteins that make up Cytochrome b-245, thought to be a primary component of the microbicidal oxidase system of phagocytes. NOX2 deficiency is one of five described biochemical defects associated with chronic granulomatous disease (CGD) (2). Activation of the NOX2 enzyme complex in microglia is thought to be neurotoxic and may play a role in Alzheimer's and Parkinson's disease (3).

### **NOX2 Antibody - References**

Bedard K and Krause KH. The Nox family of ROS-generating NADPH oxidases: physiology and pathophysiology. *Physiol. Rev.* 2007; 87:245-313.  
Segal AW. Cytochrome b-245 and its involvement in the molecular pathology of chronic granulomatous disease. *Hematol. Oncol. North Am.* 1988; 2:213-23.  
Surace MJ and Block ML. Targeting microglia-mediated neurotoxicity: the potential of NOX2 inhibitors. *Cell Mol. Life Sci.* 2012; 69:2409-27.