

Goat Anti-CYBB / GP91-PHOX Antibody
Peptide-affinity purified goat antibody
Catalog # AF1288a**Specification**

Goat Anti-CYBB / GP91-PHOX Antibody - Product Information

| | |
|-------------------|--|
| Application | WB, IHC, E |
| Primary Accession | P04839 |
| Other Accession | NP_000388 , 1536 |
| Reactivity | Human |
| Predicted | Dog |
| Host | Goat |
| Clonality | Polyclonal |
| Concentration | 100ug/200ul |
| Isotype | IgG |
| Calculated MW | 65336 |

Goat Anti-CYBB / GP91-PHOX 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

Dilution

WB~~1:1000
IHC~~1:100~500
E~~N/A

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-CYBB / GP91-PHOX Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CYBB / GP91-PHOX 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, PubMed:36241643, PubMed:36413210, 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 (Probable) (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:19028840, 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). 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

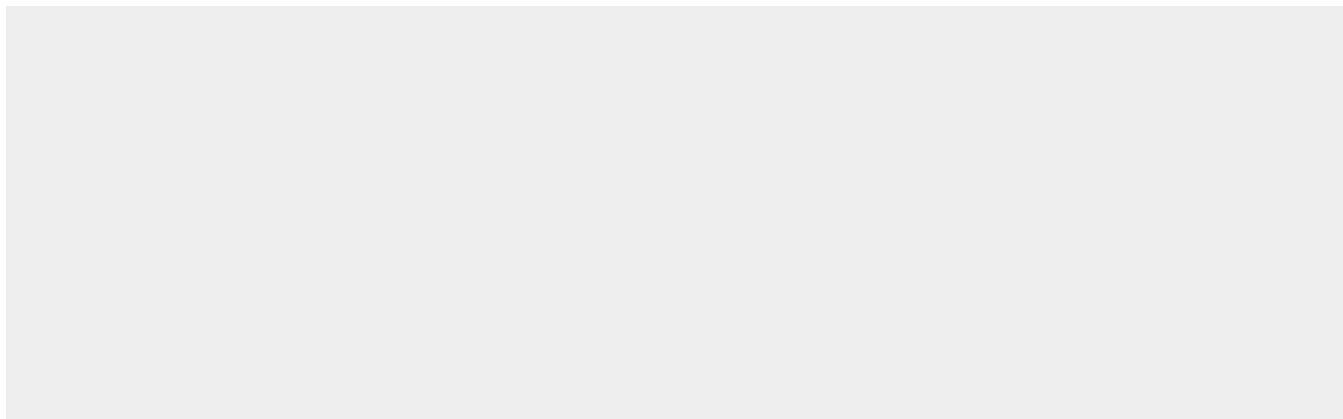
Detected in neutrophils (at protein level).

Goat Anti-CYBB / GP91-PHOX Antibody - Protocols

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

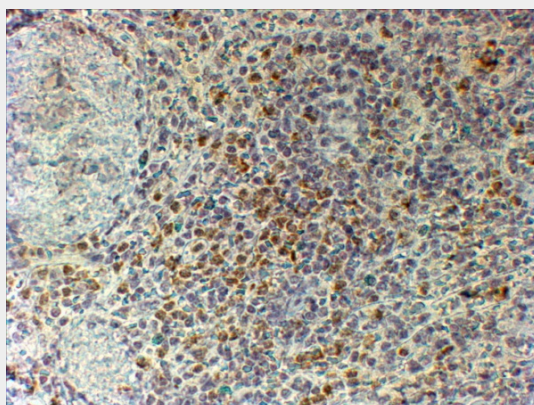
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-CYBB / GP91-PHOX Antibody - Images





AF1288a (0.03 µg/ml) staining of Human Peripheral Blood Mononucleocytes lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF1288a (2 µg/ml) staining of paraffin embedded Human Spleen. Steamed antigen retrieval with citrate buffer pH 6, HRP-staining.

Goat Anti-CYBB / GP91-PHOX Antibody - Background

Cytochrome b (-245) is composed of cytochrome b alpha (CYBA) and beta (CYBB) chain. It has been proposed as a primary component of the microbicidal oxidase system of phagocytes. CYBB deficiency is one of five described biochemical defects associated with chronic granulomatous disease (CGD). In this disorder, there is decreased activity of phagocyte NADPH oxidase; neutrophils are able to phagocytize bacteria but cannot kill them in the phagocytic vacuoles. The cause of the killing defect is an inability to increase the cell's respiration and consequent failure to deliver activated oxygen into the phagocytic vacuole.

Goat Anti-CYBB / GP91-PHOX Antibody - References

New p22-phox monoclonal antibodies: identification of a conformational probe for cytochrome b 558. Campion Y, et al. J Innate Immun, 2009 Oct. PMID 20375611.
Genetic risk factors for hepatopulmonary syndrome in patients with advanced liver disease. Roberts KE, et al. Gastroenterology, 2010 Jul. PMID 20346360.
iPLA2, a novel determinant in Ca²⁺- and phosphorylation-dependent S100A8/A9 regulated NOX2 activity. Schenten V, et al. Biochim Biophys Acta, 2010 Jul. PMID 20219570.
Polymorphisms in innate immunity genes and patients response to dendritic cell-based HIV immuno-treatment. Segat L, et al. Vaccine, 2010 Mar 2. PMID 20056178.
Regulation of phagocyte NADPH oxidase by hydrogen peroxide through a Ca(2+)/c-Abl signaling pathway. El Jamali A, et al. Free Radic Biol Med, 2010 Mar 15. PMID 20043988.