Purified Mouse Anti-gp91[phox]

**Product Information**

- **Material Number:** 611415
- **Size:** 150 µg
- **Concentration:** 250 µg/ml
- **Clone:** 53/gp91[phox]
- **Immunogen:** Mouse gp91[phox] aa. 450-556
- **Isotype:** Mouse IgG1
- **Reactivity:**
  - QC Testing: Mouse
  - Tested in Development: Rat
- **Target MW:** 58 kDa
- **Storage Buffer:** Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

**Description**

Although dormant in resting granulocytes, macrophages, and B lymphocytes, the neutrophil respiratory burst oxidase (NADPH-oxidase) generates superoxide and secondary oxygen-derived toxic products in response to bacteria or a variety of soluble stimuli. It is an integral membrane cytochrome, b558, which consists of two subunits, gp91[phox] and p21[phox]. Upon stimulation, cytochrome b558 forms a complex with cytosolic proteins, p67[phox], p47[phox], p40[phox], and rac2 and produces superoxide anions in a NADPH-dependent manner. In chronic granulomatous disease (CGD), severe recurrent bacterial and fungal infections result from defective NADPH-oxidase activity. The majority of CGD cases are caused by a defective gp91[phox] gene. gp91[phox], implicated as a docking site for p47[phox], is membrane glycoprotein with multiple N-terminal hydrophobic domains and a hydrophilic C-terminus. The expression of gp91[phox] is restricted to terminally differentiated phagocytes and B lymphocytes. This cell type- and developmental stage-specific expression may be controlled by transcriptional activators, such as PU.1 and YY1, and transcriptional repressors, such as CCAAT displacement protein (CDP). Endogenous mouse gp91[phox] shows 58 kDa band, instead of 91 kDa observed in human. Both mouse and human deglycosylated gp91 are 54 kDa. This difference may be due to less glycosylation sites in the mouse sequence.


**Immunofluorescent staining of mouse macrophage cells with gp91[phox] antibody.**

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

**Application Notes**

<table>
<thead>
<tr>
<th>Application</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western blot</td>
<td>Routinely Tested</td>
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<tr>
<td>Immunofluorescence</td>
<td>Tested During Development</td>
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</table>
Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>611479</td>
<td>Mouse Macrophage Cell Lysate</td>
<td>500 µg</td>
<td>(none)</td>
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<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1.0 ml</td>
<td>(none)</td>
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<tr>
<td>554001</td>
<td>FITC Goat Anti-Mouse Ig</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
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<tr>
<td>610354</td>
<td>Purified Mouse Anti-Human p47[phox]</td>
<td>50 µg</td>
<td>1/p47Phox</td>
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<td>610912</td>
<td>Purified Mouse Anti-p67 [phox]</td>
<td>50 µg</td>
<td>29/p67phox</td>
</tr>
</tbody>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References


Yu L, Quinn MT, Cross AR, Dinauer MC. Gp91(phox) is the heme binding subunit of the superoxide-generating NADPH oxidase. Proc Natl Acad Sci U S A. 1998; 95(14):7993-7998. (Biology)