**Background:** The phagocytic NADPH oxidase is a multiprotein enzyme that catalyzes the reduction of oxygen to superoxide in response to pathogenic invasion. The NADPH oxidase consists of 6 subunits, including the membrane-bound p91 phox and p22 phox heterodimers (also known as cytochrome b558), the cytosolic complex of p40phox, p47phox and p67phox, and the small GTPase Rac2. Activation of NADPH oxidase is initiated by cytosolic complex phosphorylation, which induces a conformational change that leads to the translocation of the cytosolic complex to the membrane and formation of an active enzyme with cytochrome b558 (1). Defects in p47phox, often resulting from recombination between p47phox and a nearby homologous pseudogene, cause chronic granulomatous disease (2-4). Elevated oxidative stress due to increased myocardial NADPH oxidase activity may be a contributing factor in heart failure (5,6).

**Specificity/Sensitivity:** p47phox Antibody detects endogenous levels of total p47phox protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg292 of human p47phox. Antibodies are purified by peptide affinity chromatography.

**Background References:**