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Although *Candida glabrata* is an important pathogenic *Candida* species, relatively little is known about its innate immune recognition. Here, we explore the potential role of Dectin-2 for host defense against *C. glabrata*. Dectin-2-deficient (Dectin-2^{-/-}) mice were found to be more susceptible to *C. glabrata* infections, showing a defective fungal clearance in kidneys but not in the liver. The increased susceptibility to infection was accompanied by lower production of T helper 1 (Th1) and Th17-derived cytokines by splenocytes of Dectin-2^{-/-} mice, while macrophage-derived cytokines were less affected. These defects were associated with a moderate yet significant decrease in phagocytosis of the fungus by the Dectin-2^{-/-} macrophages and neutrophils. Neutrophils of Dectin-2^{-/-} mice also displayed lower production of reactive oxygen species (ROS) upon challenge with opsonized *C. glabrata* or *C. albicans*. This study suggests that Dectin-2 is important in host defense against *C. glabrata* and provides new insights into the host defense mechanisms against this important fungal pathogen.