Rhomboid antigens are promising targets in the vaccine development against Toxoplasma gondii

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Abstract

Toxoplasma gondii (*T. gondii*) is an obligate intracellular parasite with worldwide distribution. It is estimated that near one-third of the people around the globe are latently seropositive for the parasite. Since the current common drugs are incapable in the elimination of parasites within tissue cysts, the development of an effective vaccine has high priority for researchers to limit the infection. During recent years, non-stop efforts of scientists have made great progress in the identification and development of *T. gondii* candidate vaccines. However, there is a lack of a commercially licensed vaccine for human application yet. Rhomboid proteases (ROMs) are a class of serine proteases that have an important role in the invasion of the parasites that can be *considered as a new target* for *vaccine* strategy. They also play critical roles in mitochondrial fusion and growth factor signaling, allowing the parasite to completely enter into the host cell. In the current review, we have summarized the recent progress regarding the development of ROM-based vaccines against acute and chronic *T. gondii* infection in animal models.

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