

Basic Virology: Human Norovirus Protein Immunity

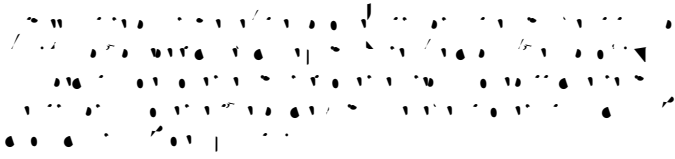
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Introduction

Human norovirus (NoV) is a major cause of acute gastroenteritis in humans. The virus is highly contagious and can be transmitted via person-to-person contact, contaminated food, and water. The immune response to NoV is complex and involves both humoral and cellular immunity. The humoral response is characterized by the production of neutralizing antibodies that can prevent infection and reduce the severity of disease. However, the cellular response, particularly involving T cells, is also important for clearing the infection and preventing reinfection. The interplay between these two types of immunity is still being investigated.

The NoV capsid protein is the primary target for neutralizing antibodies. These antibodies bind to the capsid and prevent the virus from attaching to and entering host cells. In addition, the capsid protein is also a target for T cell-mediated immunity. CD4+ T cells are involved in the regulation of the humoral response, while CD8+ T cells are thought to play a role in the clearance of infected cells. The cellular response is thought to be more important for the resolution of acute infection and the prevention of long-term carriage.

Understanding the mechanisms of NoV protein immunity is important for the development of effective vaccines and antiviral therapies. This review discusses the current state of knowledge on the immune response to NoV and highlights key areas for future research.



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