CREATIVE BIOMART®
Diagnostic Proteins

Recombinant Norovirus GII.10 VLP

Product Information

Cat#
NOR-513
Product Name
Recombinant Norovirus GII.10 VLP
Description
Norovirus VP1 protein is the capsid protein of Norovirus. It is a 59kD glycoprotein with three key domains. The shell domain (S domain) contains elements essential for the formation of the icosahedron. The Protruding domain (P domain) is divided into sub-domains P1 and P2. P domain interacts in dimeric contacts that increase the stability of the capsid and form the protrusions on the virion. A hypervariable region in P2 is thought to play an important role in receptor binding and immune reactivity.The Norovirus VP1 protein self-assembles to form the Norovirus virion, containing 180 copies of the protein. VP1 protein in a mammalian cell expression system, which produces intact virus-like particles (VLPs) of very high purity. These VLPs are suitable for studies of VP1 structure, and also as potential targets for serological assays.
Type
Recombinant
Gene
VLP
Species
Norovirus GII.10
Source
HEK293
Synonyms
Norovirus GII.10 VLP

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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Purity

Greater than 50% purity by SDS-PAGE.

Background

Norovirus (NoV) is a small non-enveloped, positive-sense RNA virus belonging to the Caliciviridae family of viruses. Six norovirus genogroups have been identified to date, which are further subdivided into genotypes. NoVs have a high mutation rate and numerous genotypes have been identified. NoVs responsible for human disease are found within genogroups GII, GI and GIV. The variant GII.4 has been identified as the most common cause of Norovirus outbreaks since 2002. (Karst, S.M.).

Previously known as Norwalk virus, NoV is a major cause of non-bacterial outbreaks of acute gastroenteritis worldwide. Norovirus can infect individuals of all ages and can be a major cause of gastroenteritis in schools, care-homes, hospitals and cruise ships. Symptoms of NoV infection develop rapidly and include vomiting, nausea, abdominal cramps and diarrhoea (Robilotti, E. et al). In most cases, Nov infection is a self-limiting disease that may last 1- 3 days but can cause complications in very young, elderly and immunocompromised individuals. In some severe cases, NoV infection can result in dehydration, hospitalisation and death. (CDC).

NoV is highly contagious. It can persistent in the environment and is resistant to most household disinfectants. Transmission of NoV primarily occurs through the faecal oral route and through contact with infected individuals, contaminated clothing, surfaces, food and water. In the USA, NoV is the major cause of food related illness. (CDC).

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