VIASURE *MULTIPLEX*

Norovirus GI + GII Real Time PCR Detection Kit

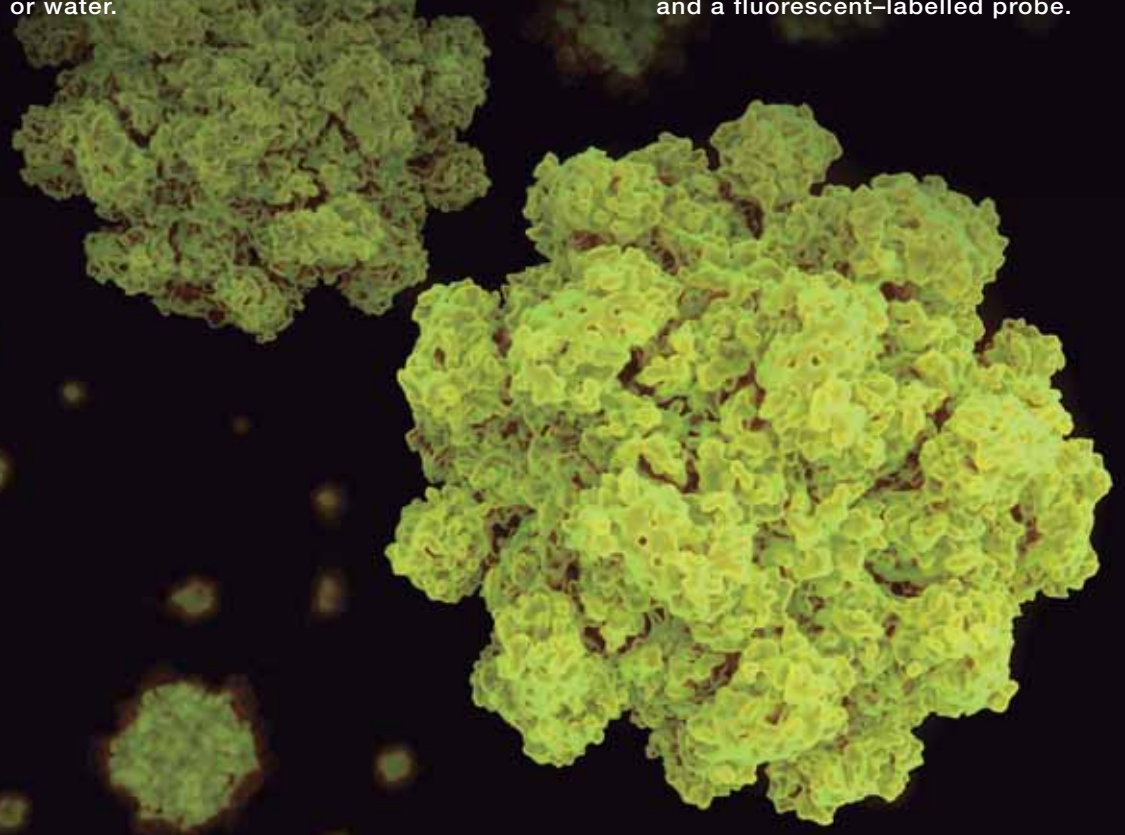
Pathogen and product description

Norovirus (NoV) belong to the *Caliciviridae* family and and is considered to be the major cause of acute nonbacterial gastroenteritis in all age groups, worldwide. NoVs are classified into six distinct genogroups (GI-GVI) based on phylogenetic clustering of the complete VP1 amino acid sequence. In particular, genogroups GI, GII, and GIV infects humans. They are further divided into genotypes defined on the basis of either the RNA polymerase and/or the capsid protein VP1 sequences. To date, nine capsid genotypes have been recognized in GI and twenty two in GII, and three genotypes of GII (GII.11, GII.18, and GII.19) have been uniquely detected in swine. Among them, GII.4 is responsible for the majority of the norovirus outbreaks worldwide.

After an incubation period of 12 to 48 h, norovirus illness is characterized by projectile vomiting, nonbloody diarrhea, nausea, abdominal cramps, and low-grade fever. Noroviruses can infect humans via multiple routes, including the oral route, transmitted through contact with fecal matter or aerosolized vomitus from infected people, as well as contaminated surfaces, food, or water.

The Norovirus genome consists of a single-stranded, positive-sense RNA containing three open reading frames (ORFs). The ORF1 encodes a polypeptide of six non-structural proteins, including RNA dependent RNA polymerase (RdRp), the ORF2 encodes the major capsid protein, VP1, whereas the ORF3 encodes the minor capsid protein, VP2. Most real-time RT-PCR assays for GI and GII Norovirus target the RNA polymerase-capsid junction (ORF1-ORF2 junction), which is the most highly conserved region of the Norovirus genome.

VIASURE Norovirus GI + GII Real Time PCR Detection Kit is designed for the diagnosis of Norovirus GI and/or Norovirus GII in human stool samples. The detection of Norovirus GI and Norovirus GII is done in one step real time RT format where the reverse transcription and the subsequent amplification of specific target sequence occur in the same reaction well. The isolated RNA targets are transcribed generating complementary DNA by reverse transcriptase which is followed by the amplification of a conserved region of the ORF1-ORF2 junction for Norovirus GI and GII using specific primers and a fluorescent–labelled probe.



Kit available with extraction control.

THE REAL ONE STEP qPCR

Analytical sensitivity

VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit has a detection limit of ≥ 10 RNA copies per reaction for Norovirus GI and Norovirus GII (Figure 1 and 2).

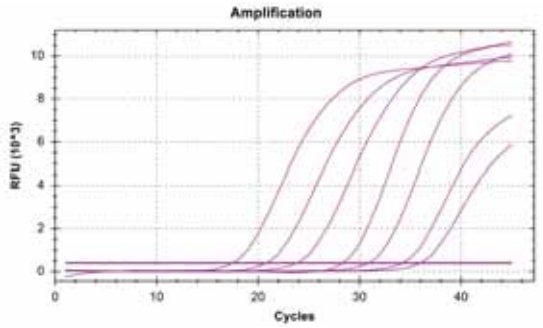


Figure 1. Dilution series of Norovirus GI (10^7–10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Cy5 channel).

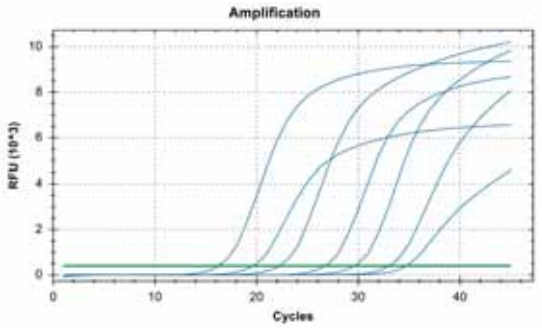


Figure 2. Dilution series of Norovirus GII (10^7–10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (FAM channel).

Components

Reagent/Material	Description	Colour	Quantity
Norovirus GI + GII 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	6/12 X 8-well strip
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1.8 mL
Norovirus Positive Control	Non-infectious synthetic lyophilized cDNA	Red	1 vial
Extraction Control	Non-infectious nucleic acid lyophilized	Green	1 vial
Negative Control	Non template control	Violet	1 vial x 1 mL
Water RNAse/DNAse free	Water RNAse/DNAse free	White	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing Wells during thermal cycling	Transparent	6/12 x 8-cap strip

Work Flow

One-step rehydration of wells and add your extracted DNA

Kit References

Reference	Description
VS-NOR106LE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-NOR106HE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-NOR112LE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-NOR112HE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-NOR113LE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 96-well plate, low profile
VS-NOR113HE	VIASURE *Norovirus GI + GII* Real Time PCR Detection Kit 96-well plate, high profile

JANT PHARMACAL CORPORATION
LABORATORY & POINT OF CARE DIAGNOSTICS

JANT PHARMACAL CORPORATION
16530 Ventura Blvd, Suite 512
Encino, CA 91436
Tel: 800.676.5565
JantDX.com info@JantDX.com

CSQ MED ISO 13485