



## Rotavirus (Group B) Real Time RT-PCR Kit

**Product Categories:** [Fabricante](#), [Humana](#), [Kit para Infecciones Intestinales](#), [Kit para Patógenos de Diarrea Infecciosa](#), [Liferiver](#), [PCR](#)

**Product Page:**

<http://vacunek.com/shop/manufacturer/liferiver/rotavirus-group-b-real-time-rt-pcr-kit/>

### Product Summary

DR-0184

### Product Description

#### 1. Intended Use

Rotavirus (Group B) real time RT-PCR kit is used for the detection of Group B Rotavirus in stool or vomit sample by using real time PCR systems.

#### 2. Product Description

Rotavirus is a genus of double-stranded RNA virus in the family Reoviridae. It is the leading cause of severe diarrhea among infants and young children. By the age of five, nearly every child in the world has been infected with rotavirus at least once. However, with each infection, immunity develops and subsequent infections are less severe. There are seven species of this virus, referred

to as A, B, C, D, E, F and G. Rotavirus A, the most common, causes more than 90% of infections in humans.

Rotavirus is transmitted by the faecal-oral route. It infects cells that line the small intestine and produces an enterotoxin, which induces gastroenteritis, leading to severe diarrhea and sometimes death through dehydration. Although rotavirus was discovered in 1973 and accounts for up to 50% of hospitalisations for severe diarrhea in infants and children, its importance is still not widely known within the public health community, particularly in developing countries. In addition to its impact on human health, rotavirus also infects animals, and is a **pathogen** of livestock.

The genome of rotavirus consists of 11 unique double helix molecules of RNA which are 18,555 nucleoside base-pairs in total. Each helix, or segment, is a gene, numbered 1 to 11 by decreasing size. Each gene codes for one protein, except genes 9 and 11, which each code for two. The RNA is surrounded by a three-layered icosahedral protein capsid. Viral particles are up to 76.5 nm in diameter and are not enveloped.

The Rotavirus (Group B) real time RT-PCR kit contains a specific ready-to-use system for the detection of the Rotavirus (for Group B) using RT-PCR (Reverse Transcription Polymerase Chain Reaction) in the real-time PCR system. The master contains a Super Mix for the specific amplification of the Rotavirus RNA. The reaction is done in one step real time

RT-PCR. The first

step is a reverse transcription (RT), during which the Rotavirus RNA is transcribed into cDNA.

Afterwards, a thermostable DNA polymerase is used to amplify the specific gene fragments by

means of PCR (polymerase chain reaction). Fluorescence is emitted and measured by the real time

systems' optical unit during the PCR. The detection of amplified Rotavirus DNA fragment is

performed in fluorimeter channel FAM with the fluorescent quencher BHQ1. In addition, the kit

contains a system to identify possible PCR inhibition by measuring the HEX/VIC/JOE fluorescence of the internal control (IC). An external positive control defined as

$1 \times 10^7$  copies/ml is

supplied which allow the determination of the gene load.