

# Parasite diagnostics

Rapid and reliable detection by real-time PCR



RIDA® GENE Parasitic Stool Panel I  
RIDA® GENE Parasitic Stool Panel II  
RIDA® GENE Dientamoeba fragilis

More information:



<https://r-b.io/1n>

# Parasitic gastroenteritis

## Sensitive and specific detection of major protozoans by molecular diagnostics

RIDA®GENE assays are intended for use as an aid in diagnosis of gastrointestinal infection caused by parasites. *Giardia lamblia*, *Cryptosporidium* spp., *Entamoeba histolytica* and *Dientamoeba fragilis* are the most important diarrhea-causing protozoa.

***Giardia lamblia*** (synonym *G. intestinalis* or *G. duodenales*) is one of the most relevant, non-viral pathogens causing diarrhea. Infections occur in 2 % of all adults and 6 - 8 % of all children in developed countries, and about one third of all people in developing countries are infected with this protozoan.<sup>1</sup> The CDC (*Center for Disease Control*) estimates about 77,000 cases of giardiasis in the US each year.<sup>2</sup>

***Cryptosporidium parvum*** is one of several species of the genus *Cryptosporidium*. Besides *C. parvum*, also *C. hominis* most commonly causes cryptosporidiosis in humans.<sup>3</sup> However, also infections by other *Cryptosporidium* species such as *C. felis*, *C. meleagridis*, *C. canis*, and *C. muris* may lead to clinical symptoms.

An estimated 748,000 cases of cryptosporidiosis occur in the US each year.<sup>3,4</sup>

***Entamoeba histolytica*** is the only human-pathogenic species of the genus *Entamoeba* and the causative agent of amoebiasis. In 10 % of *Entamoeba histolytica* cases, the infection leads to amoebic colitis and on rare occasions to extraintestinal amoebiasis, mostly to the liver (also to amoebic liver abscess). The WHO estimates that about 50 million people worldwide suffer from amoebiasis each year, resulting in 100,000 deaths each year.<sup>5</sup>

***Dientamoeba fragilis*** is distributed worldwide, however it is also one of the most underrated diarrhea-causing protozoa. Recent studies demonstrate the pathogenic potential and imply it as a common cause of gastrointestinal disease. The prevalence of *Dientamoeba fragilis* varies from 0.3 % to 52 % and often exceeds that of *Giardia lamblia*.<sup>6</sup>

## RIDA® GENE real-time PCR for parasitic gastrointestinal infections – detection overview

	RIDA®GENE Parasitic Stool Panel I	RIDA®GENE Parasitic Stool Panel II	RIDA®GENE Dientamoeba fragilis
<b>Detection</b>	<i>Dientamoeba fragilis</i>		
	<i>Giardia lamblia</i>	<i>Giardia lamblia</i>	<i>Dientamoeba fragilis</i>
	<i>Entamoeba histolytica</i>	<i>Entamoeba histolytica</i>	
	<i>Cryptosporidium</i> spp.	<i>Cryptosporidium</i> spp.	
<b>Thermal profile</b>	DNA profile and universal profile		
<b>Time to result</b>	~ 60 - 90 min*		
<b>Controls</b>	• Positive control • Negative control • Internal control DNA		

\* Dependent on the instrument used.



### RIDA®GENE Parasitic Stool Panel I

Art. No. PG1715

- Splex real-time PCR
- Detection of *Giardia lamblia*, *Entamoeba histolytica*, *Cryptosporidium* spp. and *Dientamoeba fragilis*



### RIDA®GENE Parasitic Stool Panel II

Art. No. PG1725

- Multiplex real-time PCR
- Detection of *Giardia lamblia*, *Entamoeba histolytica* and *Cryptosporidium* spp.



### RIDA®GENE Dientamoeba fragilis

Art. No. PG1745

- Multiplex real-time PCR
- Specific detection of *Dientamoeba fragilis*

<sup>1</sup> Centers for Disease Control and Prevention 2011. Giardia Epidemiology & Risk Factors, <http://www.cdc.gov/parasites/giardia/epi.html>.

<sup>2</sup> Food and Drug Administration (FDA) 2011. Bad Bug Book 2<sup>nd</sup> Edition.

<http://www.fda.gov/food/foodsafety/foodborneillness/foodborneillnessfoodbornepathogensnaturaltoxins/badbugbook/default.html>.

<sup>3</sup> Centers for Disease Control and Prevention. <http://www.cdc.gov/parasites/crypto/biology.html>. Accessed 07.03.2014.

<sup>4</sup> Leitch GJ and Qing He. Cryptosporidiosis - an overview. J Biomed Res. 2012, 25(1): 1-16.

<sup>5</sup> Fotedar R et al. Laboratory diagnostic techniques for Entamoeba species. Clin Microbiol Rev. 2007, 20(3):511-532.

<sup>6</sup> Stark D et al. A review of the clinical presentation of dientamoebiasis. Am J Trop Med Hyg. 2010, 82(4):614-619.

Baratt JLN et al. A review of Dientamoeba fragilis carriage in humans: several reasons why this organism should be considered in the diagnosis of gastrointestinal illness. Gut Microbes. 2011, 2(1):3-12.

# Ordering information

Product	Tests	Matrix	Art. No.
<b>RIDA®GENE</b>			
RIDA®GENE Parasitic Stool Panel I	100	Stool	PG1715
RIDA®GENE Parasitic Stool Panel II	100	Stool	PG1725
RIDA®GENE Dientamoeba fragilis	100	Stool	PG1745



Contact us for more information:  
[info@rbiopharm.de](mailto:info@rbiopharm.de)