



A300FLK. Giardi-a-Glo™ Comprehensive Kit
Fluorescein-labeled Monoclonal Antibody Reagent for
Direct Immunofluorescence Detection of Giardia Cysts in Water Samples

Explanation: Giardia lamblia is a common, ubiquitous, intestinal parasitic protozoan that causes gastroenteritis in man and lower animals. It is spread through food, water, and fomites with a range of reservoir host animals for both organisms. Symptoms of infection may include diarrhea, intestinal cramping, bloating, gas, vomiting, and, occasionally, low-grade fever. The Giardia stages that would appear in the feces of infected persons or lower animals is the oval-shaped cyst measuring approximately 8-13 µm in length and 7-10 µm in width. The other stage that may be present, but is much less common, is the pear-shaped trophozoite, measuring approximately 9-21 µm long by 5-15 µm wide. This kit is designed to detect the cyst stage of Giardia and will not detect the trophozoite.

Biological Principles: This kit utilizes the principle of direct immunofluorescence. The **antibody** reagent consists of a fluorescein-labeled mouse monoclonal antibody made to a cyst wall antigenic site (epitope) of Giardia lamblia. The reagent will bind only to the cysts of this parasite if they are present. The cysts will appear bright apple-green when viewed under a fluorescence microscope using the appropriate filters for fluorescein.

Description of Products: Reagent included is a working dilution (1x) of a fluorescein (FL)-labeled monoclonal antibody made against cysts of Giardia lamblia (= G. intestinalis). This kit provides enough reagent for at least 75 tests, using one drop per test (approximately 45 µL per drop.) The antibody reagent contains 0.04% w/v sodium azide as preservative and 1% bovine serum albumen as antibody stabilizer. This reagent shows varying degrees of cross-reactivity with cysts and oocysts of other species of Giardia. Counterstain contains Evan's Blue with 0.04% w/v sodium azide as preservative. Mounting Medium is fade-retardant. Positive Control is a mixture of Giardia lamblia cysts and Cryptosporidium parvum oocysts in 1.0% formalin in PBS. The concentration of this suspension is approximately 2x10⁵ cysts and oocysts (each) per mL. 20x wash buffer is a saline solution provided for the rinsing process. SuperStick™ Slides are chemically treated to increase cell adhesion. The wells measure 15 mm in diameter.

Kit Includes:

- 1 dropper vial containing 3.5 mL working dilution (1x) reagent
- C101: 1 dropper vial containing 3.5 mL counterstain
- M101: 1 dropper vial containing 3.5 mL No-Fade™ Mounting Medium
- 1 glass vial containing 1.0 mL positive control
- 1 screw cap bottle containing 50 mL 20x wash buffer
- S100-2: 1 box of two-well SuperStick™ Slides, 40/box

Other Lab Supplies Not Included, but Available:

- S100-1: One-well SuperStick™ Slides, 40/box
- S100-3: Three-well SuperStick™ Slides, 40/box
- M102: 3.5 mL Elvanol No-Fade™ Mounting Medium

Storage: Store at 4° C. DO NOT FREEZE!

Instructions for Use:

1. Water particulates should be air-dried onto a well of a slide using a stream of warm (not hot) air; alternatively, a slide-warmer may be used. Do not allow the slide to become hot to the touch.
2. When the sample has dried, a methanol fixation step may be performed at this point; however, methanol fixation is not required for this reagent to bind well to cysts and oocysts nor will it interfere with the antigen-antibody reaction.
3. When the sample has dried **completely**, apply one drop (approximately 45 µL) of **Giardi-a-Glo™** antibody reagent to the dried water particulates in each well. If necessary, spread the drop with applicator stick or glass rod, being careful not to contact the surface of the slide.
4. Incubate the slide in a humid chamber at room temperature for at least **40 minutes**. If using a 37°C incubator, incubate for 30 minutes. Longer incubation periods are OK.
5. Rinse the slide free of antibody reagent by soaking the slide in a Coplin jar, beaker, or other vessel for approximately 60 seconds in 1x saline wash solution or in "PBS" (phosphate-buffered saline).
6. Non-specific background fluorescence may be reduced, and a reddish background fluorescence added to enhance contrast, by the use of counterstain at this stage. Apply 1 drop of counterstain per well. (Incubate for one minute. Follow with a one-minute rinse with PBS or saline. Longer incubations are OK.)
7. Following a rinse, the slide should be partially to completely air-dried on a slant and mounted with one drop per well of the mounting medium and either one 22x50 mm coverslip or two 22x22 mm coverslips.

For assistance, technical questions, or to inquire about other Waterborne™, Inc. products, please call, FAX, or e-mail us. Also, please visit our website at www.waterborneinc.com.

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