

Stage L3 *Acanthocheilonema viteae* Infective Larvae (Frozen)

Catalog No. NR-48886

This reagent is the tangible property of the U.S. Government.

For research use only. Not for human use.

Contributor:

Michelle Michalski, Filariasis Research Reagent Resource Center Director of Communication/Project Liaison, Professor, University of Wisconsin Oshkosh, Oshkosh, Wisconsin, USA

Manufacturer:

Filariasis Research Reagent Resource Center supported by Contract HHSN272201000301, NIH-NIAID Animal Models of Infectious Disease Program¹

Product Description:

Classification: Onchocercidae, *Acanthocheilonema*

Species: *Acanthocheilonema viteae* (previously referred to as *Dipetalonema viteae*)

Strain: FR3

Original Source: *Acanthocheilonema viteae* (*A. viteae*), strain FR3, was obtained from TRS Laboratories in Athens, Georgia, USA.²

Comment: *A. viteae* does not contain the *Wolbachia* endosymbiont like most filarial nematodes that cause human disease. *A. viteae* is often used as the negative control for experiments investigating the bacterium.²

A. viteae is a filarial nematode that parasitizes rodents in Eastern Europe, Iran and North Africa. Natural hosts of *A. viteae* include the Libyan gerbil (*Meriones libycus*) and some species of the *Jaculus* and *Rhombomys* rodent genera. *A. viteae* can also infect experimental hosts including Golden Syrian LVG hamsters (*Mesocricetus auratus*), Mongolian gerbils (*Meriones unguiculatus*) and rats (*Mastomys natalensis*). In nature, third-stage infective larvae (L3) of *A. viteae* are transmitted to their mammalian host by the soft tick *Ornithodoros tartakovskyi*. *Ornithodoros moubata* can be used as an experimental vector for *A. viteae* in the lab. Once inside the mammalian host, the L3 develop into adult worms and generate microfilariae, which are ingested by the tick during its bloodmeal. The microfilariae develop inside the vector to L3, before migrating to the arthropod mouth parts for transmission to the mammalian host when the arthropod feeds.²⁻⁵

Material Provided:

NR-48886 consists of up to 1000 stage L3 *A. viteae* infective larvae frozen in no more than 250 µL PBS. If more material is required for your intended use, please contact BEI Customer Services at contact@beiresources.org to request the additional material.

Note: Specific questions regarding handling of *A. viteae* can be sent to Dr. Shelly Michalski at michalsk@uwosh.edu.

Packaging/Storage:

NR-48886 is packaged in 2 mL round bottom tubes. The product is provided on dry ice and should be stored at -20°C or colder immediately upon arrival (depending on desired application).

Citation:

Acknowledgment for publications should read "The following reagent was provided by the NIH/NIAID Filariasis Research Reagent Resource Center for distribution by BEI Resources, NIAID, NIH: Stage L3 *Acanthocheilonema viteae* Infective Larvae (Frozen), NR-48886."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories, 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as

performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Michalski, M. L., et al. "The NIH-NIAID Filariasis Research Reagent Resource Center." PLoS Negl. Trop. Dis. 5 (2011): e1261. PubMed: 22140585.
2. Michalski, M. L., Personal Communication.
3. Morris, C. P., et al. "A Comprehensive, Model-Based Review of Vaccine and Repeat Infection Trials for Filariasis." Clin. Microbiol. Rev. 26 (2013): 381-421. PubMed: 23824365.
4. Lucius, R. and G. Textor. "*Acanthocheilonema viteae*: Rational Design of the Life Cycle to Increase Production of Parasite Material Using Less Experimental Animals." Appl. Parasitol. 36 (1995): 22-23. PubMed: 7780447.
5. Anderson, R. C. Nematode Parasites of Vertebrates: Their Development and Transmission. 2nd Ed. New York, NY: CABI Publishing, 2000.
6. Franke, E. D. and P. P. Weinstein. "In Vitro Cultivation of *Dipetalonema viteae* Third-Stage Larvae: Effect of Gas Phase." J. Parasitol. 70 (1984): 493-498. PubMed: 6438292.
7. Maki, J. and P. P. Weinstein. "*Dipetalonema vitae*: Survival of Adult Females and Microfilarial Release in Both a Chemically Defined and Serum-Supplemented Medium." J. Parasitol. 75 (1989): 953-957. PubMed: 2614606.

ATCC® is a trademark of the American Type Culture Collection.

