

## Total RNA from Adult Male *Dirofilaria immitis*, Strain FR3

### Catalog No. NR-48667

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### For research use only. Not for human use.

#### Contributor:

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#### Manufacturer:

Filariasis Research Reagent Resource Center supported by Contract HHSN272201000030I, NIH-NIAID Animal Models of Infectious Disease Program

#### Product Description:

NR-48667 is a preparation of total RNA extracted from adult male *Dirofilaria immitis* (*D. immitis*), strain FR3. *D. immitis*, strain FR3 was originally obtained from TRS Laboratories in Athens, Georgia, USA.<sup>1</sup>

*D. immitis* is a filarial nematode that causes cardiopulmonary dirofilariasis in wild and domesticated canines and felines, and is the causative parasite of human pulmonary dirofilariasis.<sup>2</sup> *D. immitis* is commonly known as heartworm disease and transmission relies on mosquitos as a vector. In the case of canines, for which *D. immitis* is best adapted, mosquitos deposit infective third stage larvae (L3) on the skin which penetrate the host. Maturation from stage L3 to L4 occurs between 3 and 12 days post-infection followed by a subsequent molt producing juvenile adult worms, between 50 and 70 days post-infection. The juvenile adult worms arrive in the pulmonary artery and right ventricle of the heart between 70 and 85 days post-infection and reach sexual maturity approximately 120 days post-infection. Adult females are able to produce and release microfilariae between 6 and 9 months post-infection, which can be taken up by mosquitos during a blood meal.<sup>3</sup>

#### Material Provided:

Each vial of NR-48667 contains 0.5 µg to 2 µg of DNase-treated RNA in TE buffer (1 mM Tris-HCl, 0.1 mM EDTA, pH ~ 8). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

#### Packaging/Storage:

NR-48667 was packaged in RNase/DNase-free plastic vials. The product is provided frozen and should be stored at -80°C or colder upon arrival. Freeze-thaw cycles should be minimized.

#### 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: Total RNA from Adult Male *Dirofilaria immitis*, Strain FR3, NR-48667."

#### 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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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#### 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. Morchon R., et al. "Heartworm Disease (*Dirofilaria immitis*) and Their Vectors in Europe – New Distribution

Trends." Front. Physiol. 3 (2012): e00196. PubMed: 22701433.

3. Simón, F., et al. "Human and Animal *Dirofilariasis*: The Emergence of a Zoonotic Mosaic." Clin. Microbiol. Rev. 25 (2012): 507-544. PubMed: 22763636.

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