Stage L3 *Dirofilaria immitis*, Strain MP3, Infective Larvae (Live)

**Catalog No. NR-49448**

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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:**

**Classification:** Onchocercidae, Dirofilaria  
**Species:** Dirofilaria immitis  
**Strain:** MP3  
**Original Source:** *Dirofilaria immitis* (D. immitis), strain MP3 was originally obtained from TRS Laboratories in Athens, Georgia, USA.¹

*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.² *D. immitis* is commonly known as heartworm disease.

*D. immitis* is a mosquito-borne filarial worm. In the case of canines, for which *D. immitis* is best adapted, mosquitoes 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 first 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 mosquitoes during a blood meal.³

Humans and felines are much less suitable hosts. In humans, *D. immitis* may be able to reach a branch of the human pulmonary artery, but would trigger an immune response that destroys the immature nematodes; this infrequently results in pulmonary nodules.³ In felines, cardiopulmonary dirofilariasis follows a similar life cycle as in canines, but is often asymptomatic, and there is a marked reduction in nematode fertility and viability.³

**Material Provided:**

NR-49448 consists of up to 1000 stage L3 *D. immitis* infective larvae. If more material is required for your intended use, please contact BEI Customer Services at contact@beiresources.org, to request the additional material.

**Packaging/Storage:**

NR-49448 was packaged in 50 mL conical tubes. The product is provided at room temperature and should be placed in an incubator, used immediately, or frozen and stored at -20°C or colder. **Note:** Freezing will kill the larvae, please consider your application prior to freezing this material.

**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 *Dirofilaria immitis*, Strain MP3, Infective Larvae (Live), NR-49448.”

**Biosafety Level:** 2


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**References:**

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