Stage L3 *Dirofilaria immitis*, Strain JYD-27, Infective Larvae (Frozen)

**Catalog No. NR-49171**
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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:** JYD-27  
**Comment:** *Dirofilaria immitis* *D. immitis*), strain JYD-27 is a subsequent passage of strain JYD-34. Dogs inoculated with JYD-27 infective larvae (L3) have not received any macrocyclic lactone drugs. This strain cannot be definitively categorized as a resistant strain.  

*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. Infection with *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.

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. 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.

**Material Provided:**
NR-49171 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-49171 was packaged in 1.5 mL centrifuge tubes. The product is provided on dry ice and should be stored at -20°C or colder immediately upon arrival.

**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 JYD-27, Infective Larvae (Frozen), NR-49171.”

**Biosafety Level:** 2


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References:

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